

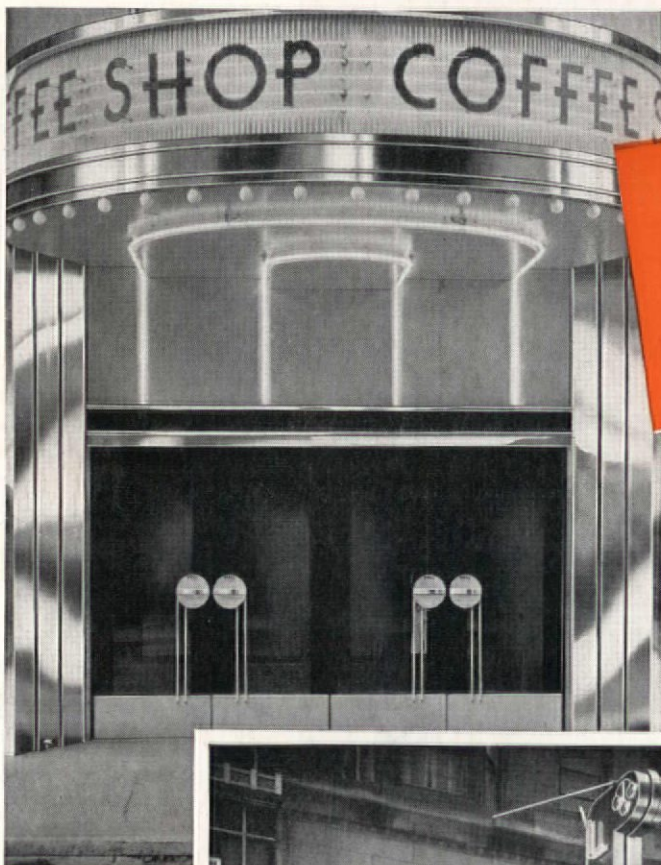
THE ARCHITECTURAL FORUM

1937 SMALL HOUSE PREVIEW

NOVEMBER, 1936

NIAGARA HUDSON'S "5 STAR HOME" SURVEY . . . BUILDING MONEY
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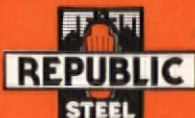
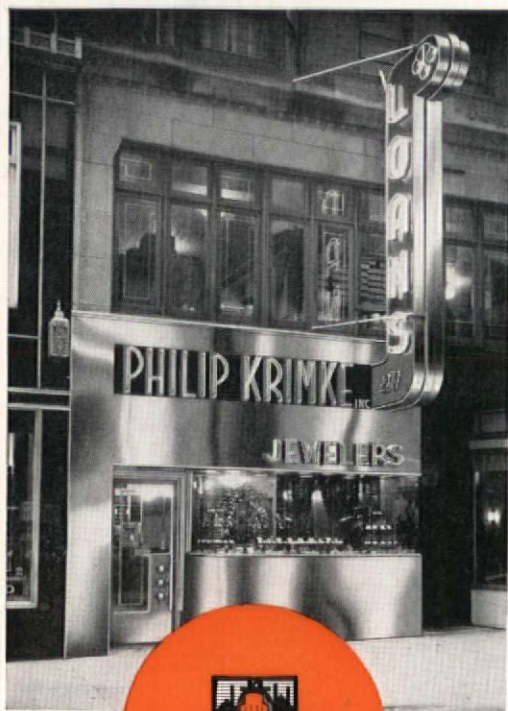
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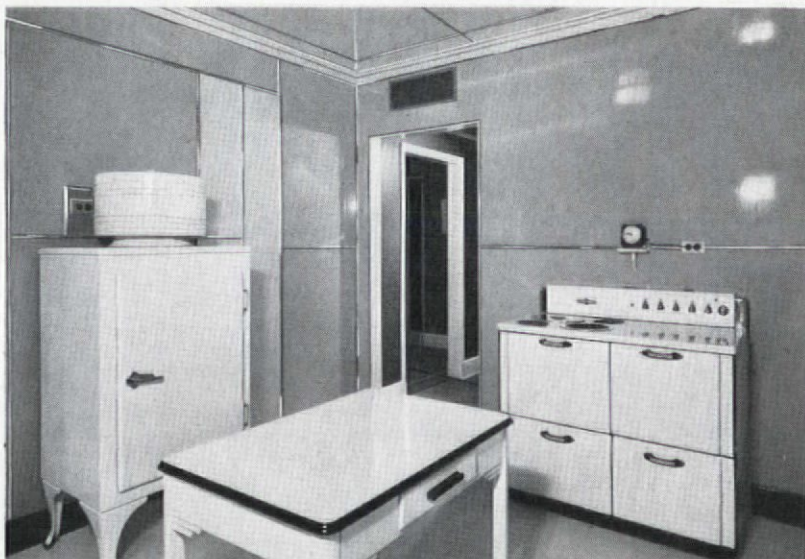
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THE ARCHITECTURAL
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VOLUME 65
Number 5

MONTH IN BUILDING

VOLUME. Volume of new permits for September, based on Department of Labor figures from 14,055 cities, reached a total of \$126,471,000. This total was divided into \$61,113,000 for new residential, \$36,569,000 for new non-residential, and \$28,789,000 for additions, alterations, and repairs. Representing more than the usual sharp seasonal decline from August (13.1 per cent), the volume slipped lower than it has been since May, lower even than in March. But Dun and Bradstreet's 215 cities had 6.6 per cent more permits in September than in August, despite the usual seasonal decline of nearly 10 per cent.

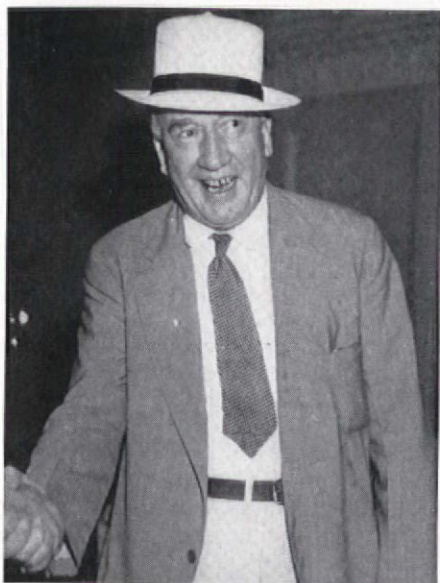
F. W. Dodge's statisticians on actual construction reported that, for the first time since 1928, the residential total in the 37 States east of the Rockies exceeded the totals for non-residential and heavy civil engineering construction. Their release puts the residential total at \$80,670,000, the total for all building at \$234,270,000.

LABOR. This month sick Labor, which has puffed its way through sub-crises all summer and fall, must rise from its bed and limp to Tampa, Fla., for the 56th convention of the American Federation of Labor. To insure a bang-up crisis at Tampa, the meddlesome Building Trades Department of the A. F. of L. last month was once more officiously intruding into the sick-room, causing the patient's blood pressure to rise. Typically last month the building trades demanded that the convention be held elsewhere because Tampa is dominated by the Barron Collier chain of hotels, one of which last spring allowed a non-union high school dance orchestra to play for Tampa high school dances.

Meanwhile two doctors, Unionmen David Dubinsky (Ladies Garment Workers) and Max Zaritsky (Millinery Workers), were ministering to sick Labor. C.I.O. lieutenants both, these two New Yorkers spent October in delicate, inconclusive skirmishings toward peace with the A. F. of L. Observers decided, a) that peace was being offered because C. I. O.'s Lewis was finding the path toward organization of the steel industry too rough and too slow; b) that A. F. of L.'s President William Green, thoroughly aware of the political capital to be made from headlines inferring that the C. I. O. is crawling back, will delay negotiations to gulp down more of these strong, black headlines in the mornings before the national convention.

Peace overtures were further effectively

interrupted by the private feud between snaggle-toothed President William L. Hutcheson of the United Brotherhood of Carpenters and Joiners of America, and C. I. O.'s Lewis, last month at its height. Long an effective dictator of his union, Carpenter Hutcheson has not called a national convention in the last eight years, presumably because of fear that he will not be re-elected. But last month came news that the rank and file had forced his hand. Carpenter Hutcheson grumpily announced a national convention for December, safely one month after the national A. F.



Harris & Ewing

Carpenter Hutcheson

of L. meeting. At this touchy juncture politics brought further signs of unrest from the 300,000 members of this most powerful union in the Building Trades Department.

Carpenter Hutcheson is a Republican of long standing, serving as chairman of the Labor Division of the Republican National Committee both in 1932 and 1936.

To the Carpenters' Local Union No. 943, of Tulsa, Okla., such official Republicanism is deeply distasteful. In protest it circulated a form letter to all other locals denouncing their leader's public espousal of the Landon-Knox ticket, taking Carpenter Hutcheson to task so severely and so outspokenly that the Brotherhood's executive council was moved to send another form letter to the locals, requesting them to ignore the Tulsa letter. It also provoked the council to support their president completely. It also prompted Carpenter Hutcheson to echo an earlier fulmination: "The workers are get-

ting educated now. They know what it is all about. As they realize that a vote for Roosevelt is a vote for the C. I. O., they will think twice before they vote the Democratic ticket."

Then suddenly, badgered not only by C. I. O.'s Lewis and his own union, but disgruntled as well by the imminent publication of the "non-partisan" analysis of Democratic and Republican candidacies and platforms, in which the A. F. of L. strongly backed Roosevelt, Carpenter Hutcheson resigned his post on the A. F. of L.'s executive council. Footnoted Labor's Non-partisan League: twenty local carpenters' unions, two district councils, the loggers' division, numbering 70,000, had resolved to oppose their president's espousal of Landon.

Thus, at election's eve stood Labor, looking already beyond November 3 to its own most significant fray.

In a different connection, labor again popped into the news last month, with the release of a booklet prepared by Hervé Schwedersky, Johns-Manville statistician. After probing into comparative wage scales, clothing costs, housing costs, commodity costs, purchasing power, taxes, and ownership of luxuries in twelve countries including the U.S., Investigator Schwedersky was able to report that:

An hour's labor by a building trades worker buys more food in the U.S. than it does anywhere else.

Specifically, a U.S. carpenter can buy with one hour's wages 6.01 kilograms of white bread. A German carpenter will get 1.31 kilograms, an Englishman 4.14 kilograms, a Frenchman 3.25 kilograms.

To earn enough to purchase a basket of 23 common foods (including bread, butter, milk, bacon) sufficient to feed himself, wife, and three children, the U.S. carpenter will work 5.63 hours. A German carpenter will work for as much 20.8 hours, an Englishman 14 hours, a Frenchman 18.7 hours. The Italian must work 30.8 hours.

To earn the price of one kilowatt hour of electricity, the average skilled laborer in the U.S. must work 5.4 minutes. In Germany he will work 20.3 minutes, in England 11.7 minutes, in France 16.8 minutes.

For one hour of work, the average U.S. skilled worker will get 153 popular-priced cigarettes, while he gets only 46 in Germany, 46 in England, 49 in France.

The Schwedersky comparison is performed in two steps: a) the determination of the amount of standard commodities one hour's work will purchase in each

country, and, b) the translation of these commodities into dollars. Impossible to be taken into account is the fact that the natives of some countries habitually subsist on less food than those of others.

44th. A record crowd of 1,721 building and loaners turned up last month at Manhattan's Waldorf-Astoria Hotel for a week of deliberation and exploration. For their edification, Executive Vice President Morton Bodfish had arranged an impressive exhibit of Building and Loan advertisements, two rooms of building materials, and five days crammed with committee meetings and speeches. For their amusement were provided in the hotel "Social Rooms" with private bars (little attended), and information on the city's more palatial night spots (well attended).

In the customary succession, lean, thin-lipped Harold T. Donaldson was upped from the First Vice Presidency to the Presidency, LeGrand W. Pellett retiring. At 46, the League's new president is also president of the \$4,300,000 Union Building and Loan Association, Ltd., of Lansing, Mich., Vice President of the Lansing National Bank, which he pulled together after the bank holiday, and a director of the Federal Home Loan Bank Board of Indianapolis. He gravitated from the stove business to building and loans in 1914, has since earned for himself the reputation of being progressive in business and a cut above most building and loaners in his understanding of his profession's problems. His manner is polite, charming, his politics Landon Republican, and he gives promise of being one of the League's best parliamentarians.

Elected new First Vice President and thus designated heir apparent was Edward C. Baltz, saturnine, hard-working secretary of the Perpetual Building Association of Washington, D. C., second largest building and loan association in the country and one which has denied the Depression by its continued growth. Liberal and progressive in his business methods, he is rated one of the business's best heads. On his private yacht he throws many a gay party, likes to grouse in private about the Federal Housing Administration.

Such were the formalities of the League. Far more significant was a major and prevailing opinion revealed time and again in its committee meeting, speeches, and reports: Government supervision and intervention in building and loan affairs had gone far enough. At the first meeting of the first day, President John C. Hall of the St. Louis Federal Savings and Loan Association (\$1,700,000), onetime lawyer, and an able, sarcastic fighter, rode through the Committee on the Federal Housing Administration a report which keynoted of the FHA: "Any necessity for such a governmental enterprise has passed." Following day Executive Vice President Morton Bodfish echoed the plaint, and, before it

adjourned, the Convention endorsed it wholeheartedly.

If the desires of the 1,700 conventioners had any focal point, any confessional booth, it was to be found in the vicinity of Morton Bodfish, their astute, high-powered executive who runs the League's permanent Chicago offices and lobbies for it two months out of every twelve in Washington. From an associate professorship in land economics at Northwestern University he stepped into his job as the League's first full-time, full-pay executive in 1930. Immediately he made great capital for himself by aggressively sponsoring and pushing through the Federal Home Loan Bank System, to whose original board President Herbert Hoover appointed him. With the advent of Roosevelt he was relieved of his position on the board, but it was obvious he had booted his first horse home for a winner and his prestige remained strong. Last month's question of Government intervention was obviously Vice President Bodfish's second big chance and certainly his second big problem.

Main question, of course, was to judge how long Government supervision was to remain in building and loan affairs. As Bodfish well knew, this supervision was historically a bi-partisan affair, was therefore as liable as not to continue no matter what the color of the new administration. If with 1937 it were to abate, Bodfish would once more have hit the winner on the nose. If, on the contrary, it were to continue, the League members would find themselves committed to bucking a tide in the affairs of the nation which would obviously be stronger than the League. The process would cost everybody money and outmaneuver them; also it would leave Bodfish the butt for some severe recrimination from those building and loaners who pay him a salary to do their political thinking for them.

That he chose to ride with the majority and bank on a change in government policy seemed last month to many an impartial observer the first poor guess in a smart record, one which seemed to deny the existence and potency of a trend in increasing Government supervision of financial affairs which began with Roosevelt I, was still at Convention-time in full flood.

The other significant item of the Convention was contributed by an outsider and little remarked by the building and loaners. In a well-applauded speech, dynamic Chairman Allie S. Freed of the Committee for Economic Recovery remarked: "Your interest rates should be reduced to within one-half of one per cent of that of other savings institutions . . . This would bring your depositors' rate down to $2\frac{1}{2}\%$." Though it did not, this remark should have drawn a sharp reaction from Speaker Freed's audience. It was the first overt expression of a minority sentiment in this country that the building and loaners are out of step with contemporary trends.

There are some 49 billion dollars' worth of savings in the U. S., of which about six billions reside in building and loan vaults.

The building and loaners' six billions pay from 4 to $4\frac{1}{2}$ per cent while hardly a penny of the remaining 43 billion dollars cached in savings banks, life insurance companies, and postal savings banks yields to its investor more than 2 per cent. Explanation for this anomalous position resides, of course, in the time-honored explanation that the building and loaners take the biggest credit risks on the market, serve a group which would otherwise have no facilities for home ownership.

But to some this explanation is not compensation enough for the fact that building and loan rates make home ownership expensive. They feel a) that the building and loaners, while maintaining their 2 per cent spread, could enforce standards in housing which would make $4\frac{1}{2}$ per cent interest possible; b) that U.S. building and loaners could remedy these faults by imitating the methods of their English counterparts, particularly in the matter of branch offices and amalgamation into larger, more impressive units.

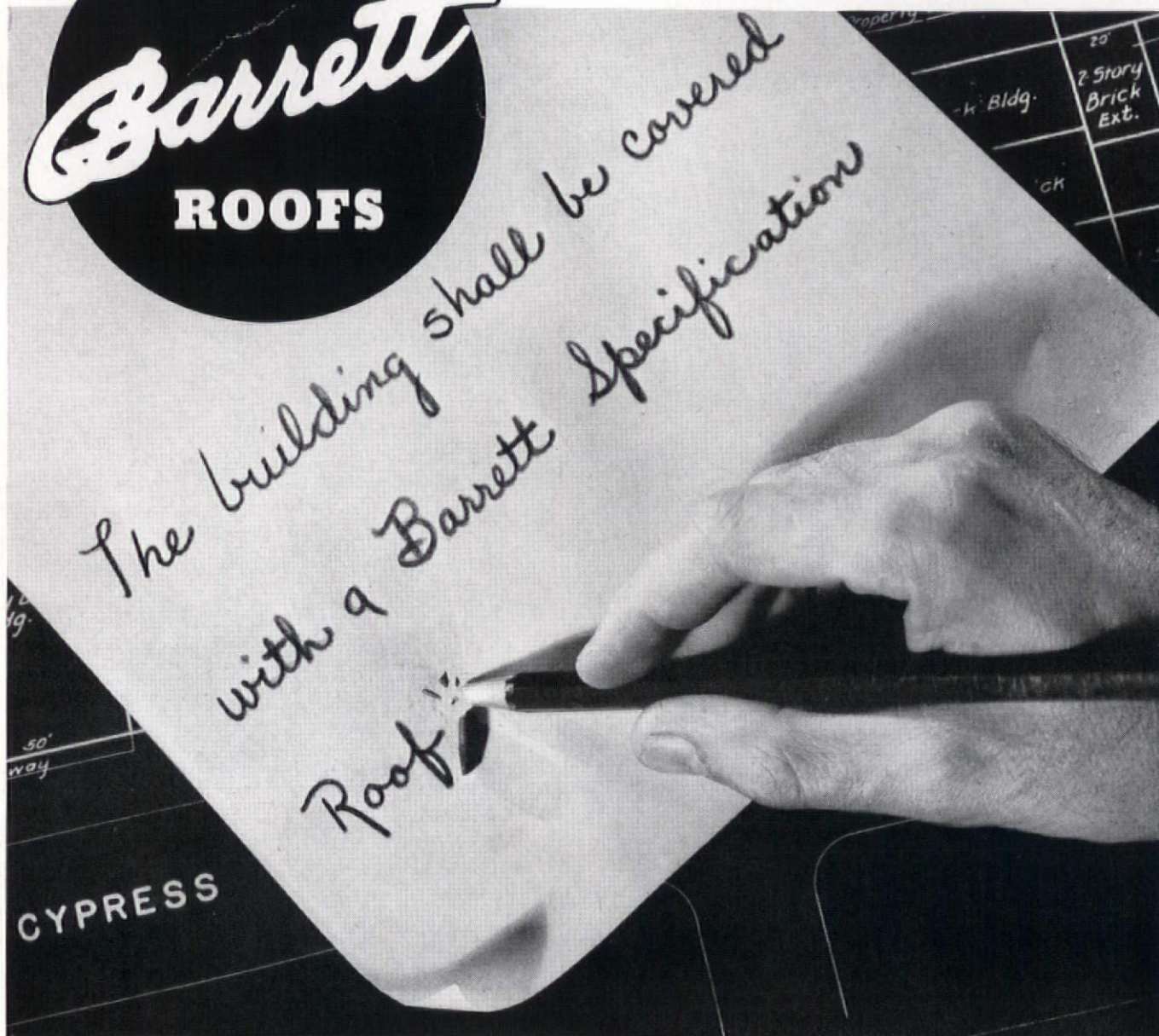
So say the critics. What they say is important to the building and loan fraternity if only because it is being said. More significantly it is important because it is symptomatic of a general tendency to reappraise the entire question of home ownership and housing in this country. What rebuttal the building and loan fraternity will give remains still to be seen. If they give any besides a denial, it would seem that they must either consolidate or resign themselves in future to a smaller and smaller slice in the pie of U.S. savings.

EARNINGS. The notable rise in urban building continues to be reflected in the upturn of earnings of the building supply manufacturers. Following is a listing of earning reports of some leading firms for the first six months of the year which shows, in all but two instances, interesting advances. Note U.S. Steel Corporation.

6 mos. ending June 30	1936	1935
Armstrong Cork . . .	1,676,399	1,523,295
Certain-teed Products . . .	205,756 D	163,708
duPont de Nemours . . .	38,691,971	22,450,485
Eagle-Picher Lead . . .	338,520	128,196
Hygrade Sylvania . . .	410,734	327,489
Inland Steel	5,232,823	4,858,306
Johns-Manville	1,474,901	798,012
Kennecott Copper . . .	9,097,891	3,418,097
Libbey-Owens-Ford . . .	5,102,972	4,284,316
Minneapolis-Honeywell Regulator . . .	674,801	271,170
National Gypsum . . .	408,382	296,045
Reynolds Metals . . .	918,209	607,514
Simmons	1,413,370	305,991
U. S. Steel	16,238,727	2,936,294 D
Westinghouse	7,937,978	6,265,188
Wheeling Steel	882,199	1,602,871
Youngstown Sheet & Tube	4,485,388	471,011 D

D=Net Loss

*After allowing for approximately \$1,500,000 flood expense.



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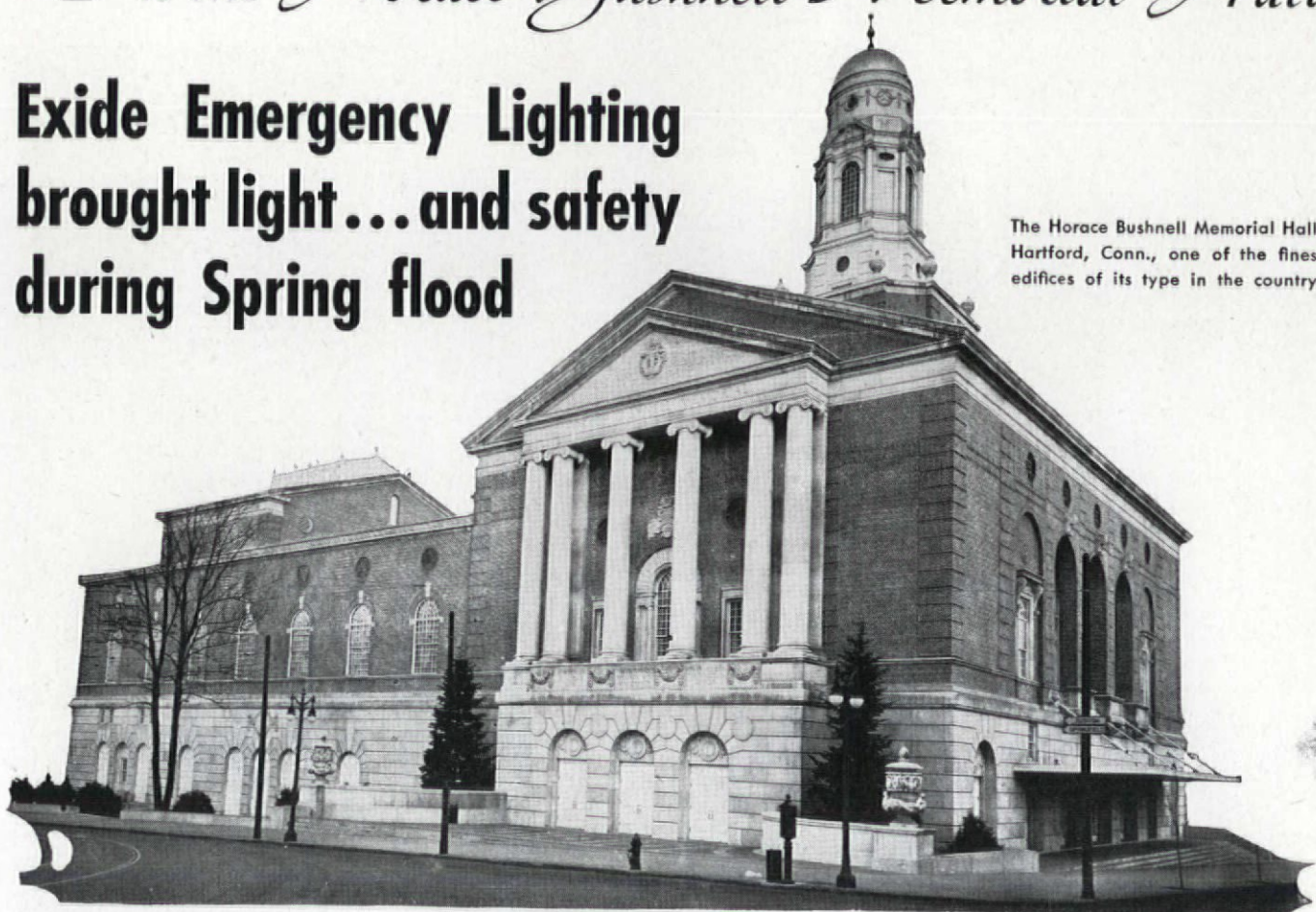
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The World's Largest Manufacturers of Storage Batteries for Every Purpose
Exide Batteries of Canada, Limited, Toronto

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Keepalite**
EMERGENCY LIGHTING SYSTEMS
\$150 AND UP

Refer to Sweet's Catalogue,
Section 27—Page 11

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I am an Architect Engineer Draftsman Student

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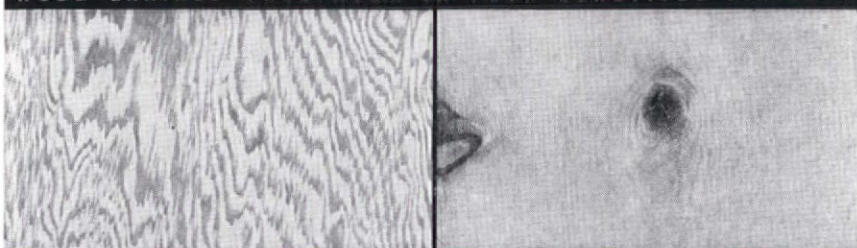
AVAILABLE IN FOUR FINISHES

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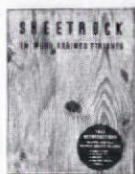
SHEETROCK . . . in Douglas Fir Finish

SHEETROCK . . . in Knotty Pine Finish



SHEETROCK . . . in Walnut Finish

SHEETROCK . . . in Matched Walnut Finish



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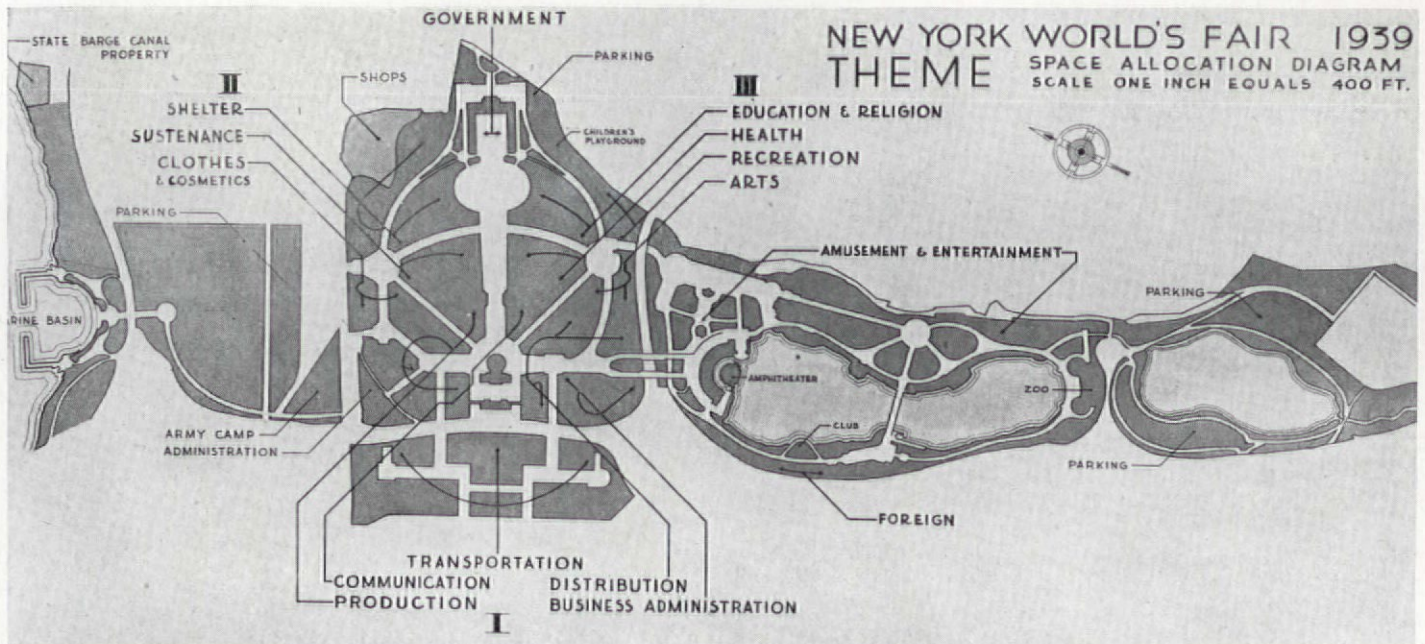
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FORUM OF EVENTS



"BUILDING THE WORLD OF TOMORROW"

FABULOUS figures inevitably accompany U. S. Fair announcements, and the impressive series of digits released with the plans of New York's World's Fair of 1939 far surpass the most optimistic forecasts of all previous forecasters. Cost and total investment: \$125,000,000. Estimated attendance: 50,000,000. Transportation facilities: 160,000 persons per hour. Parking: 30,000 cars. Average daily attendance: 250,000. Maximum daily attendance: 900,000. Number of benches (mostly in shade): 50,000. Number of trees furnishing the shade: 10,000.

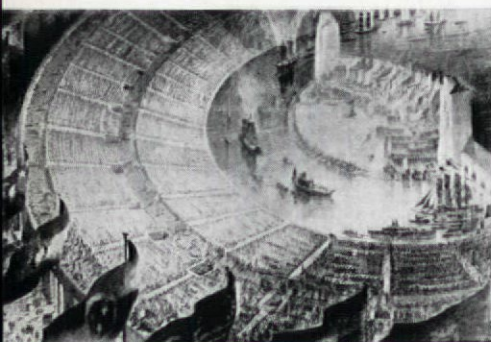
More significant, perhaps, than its size are other features of the Fair. Its program displays few of the clichés and little of the bombast of many recent U. S. expositions.

A strong attempt will be made to organize exhibits for the benefit of visitors, and private firms will not place their displays in locations unrelated to key exhibits. The theme is forward-looking: "Building the World of Tomorrow," and strong emphasis is placed on the meaning of technological developments in terms of better homes, better health, and a generally better existence for the average man. To present this basic idea, the Fair is being divided into ten sectors, each of which is devoted to a distinct phase of human activity, as shown by the diagrammatic plan above. At the core will be a "Theme Tower," where the alliance between the factors contributing to a potentially better world will be presented.

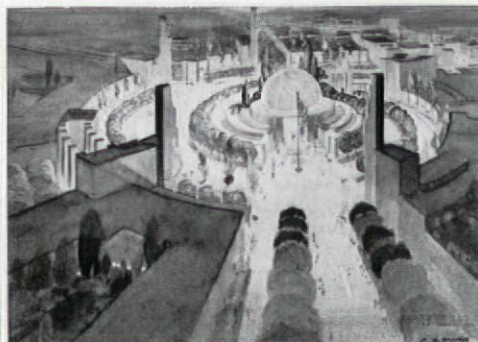
An outgrowth of the "Fair of the Future" program, written last winter by a group of young architects and designers, the New York World's Fair program violates all precedent by being the work of the Board of Design, rather than a formula handed on to the architects by an executive board, a notable advance in the technique of creating a fair.

In another respect a major advance has been made: at the insistence of the architects on the Board of Design, a landscape architect, an engineer, and an industrial designer were made members of the board, a collaboration which has proved satisfactory to all concerned.

The plan, while stretching over 3½
(Continued on page 39)



WATER STADIUM



PLANETARIUM



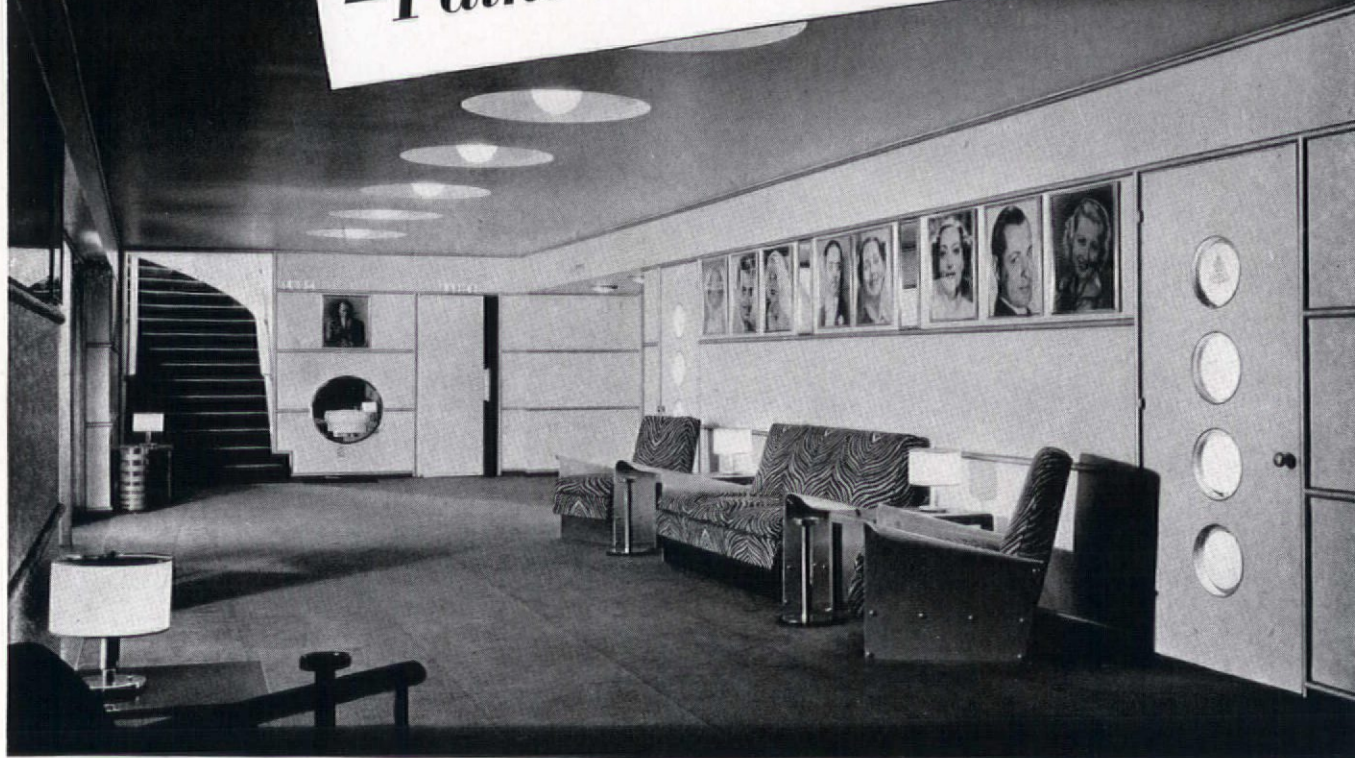
THEME TOWER



ENTRANCE GATE

NEW PLASTER?

-Paint with Luminall



Used in many noteworthy buildings for its beauty... a safeguard where moisture is in plaster or walls

● Luminall has become the largest selling casein paint on account of its beauty and charm of color and other reasons* aside from its immunity to "damp plaster" troubles.

On old or new construction where there may be dampness in plaster or in walls, Luminall is a certain safeguard against trouble. It is a paste casein paint. It is a porous paint film when dry. Moisture exits through these pores without damage.

Luminall is directly applied to plaster without primer, size or neutralizer. Later, if plaster becomes thoroughly dry and redecorating is in

* Other reasons include: odorless... dries in 40 minutes... one-coat coverage... greater light reflection... economy.



● Send today for your copy of "Painting for Light & Decoration" ... a 24-page book which gives full details regarding Luminall.

order you have a splendid undercoat for any type of paint. But the chances are that the new paint will again be Luminall because of its unusual decorative value!

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A standard gallon of Luminall paste (1½ gallons when thinned) will be delivered free of charge to any architectural firm for their tests. Simply request it on your business letterhead.

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Do architects-builders-apartment
house owners, **BUY** the Nu-Bidet?

● Because they know the public is looking for and demanding something new.

Because they know that the Nu-Bidet is the greatest advance in bathroom accessories in the past twenty-five years and that it will help sell property; help rent property and help increase rentals in one of the most painless fashions imaginable.

Because the Nu-Bidet is *the* answer to a long felt need.

In placing his order, one building owner who owns and controls more than 3½ million dollars worth of homes and apartments said they are interested in anything that will make their properties more modern and easier to rent at higher prices. Why? Because the Nu-Bidet is *his* answer to a long felt need.

Some of America's most prominent builders have ordered the Nu-Bidet as a "first aid"—so to speak—in attracting customers for homes on a wide price range from \$5990 to \$50,000. Why? Because the Nu-Bidet is *their* answer to a long felt need.

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Orders and urgent inquiries have come from every nook and corner of the United States and Canada and practically every civilized country in the world.

Why? The answer seems obvious. *They just can't all be wrong.* You too should know all about the sales creating possibilities of the Nu-Bidet. Why? Because it quite possibly will be *your* answer to a long felt need. Use the coupon now.

WHAT IS THIS NU-BIDET? READ THIS!

The Nu-Bidet is a thoroughly modernized Sitz Bath...and more. The following uses make it a safeguard to health and as necessary to personal hygiene as your tooth brush or the bathroom itself.

Sitz Bath for personal hygiene and treatment of rectal disorders. Spray for same purpose and feminine hygiene. Attachment for douche, enema and hydrotherapeutics, entirely eliminating the old rubber bag method.

The Nu-Bidet can be installed on any standard-size toilet bowl in less than two hours. It will convert the ordinary bathroom into one that is truly hygienic at a small investment. Use coupon now.



The Nu-Bidet is a complete unit of seat, Nu-Bidet and lid in one assembly, which replaces the regular seat and lid. It is equipped with a specially designed and patented vacuum breaker and also a specially designed venturi-type siphon breaker, making back siphonage or a cross connection impossible.

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IMMEDIATE Deliveries



The Nu-Bidet lifts up and stands against the lid when not in use.

The Nu-Bidet looks like the average toilet. No extra space required.

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REVECON structural sections solve completely one of the most vexing problems of the architect—a better method of constructing surfaces using standard flat sheet materials. REVECON construction enables the job to be done easier, faster, more economically. It provides for ready replacement or rearrangement of panels. It gives full protection against distortion by expansion or contraction.

How this is done cannot be told properly in an advertisement. It is better shown in the data sheets here reproduced. Sixteen of these sheets, with specifications, are now ready for distribution to responsible architects and contractors. Ask for the new Revere "REVECON HANDBOOK." Write us on your own letterhead for your copy.

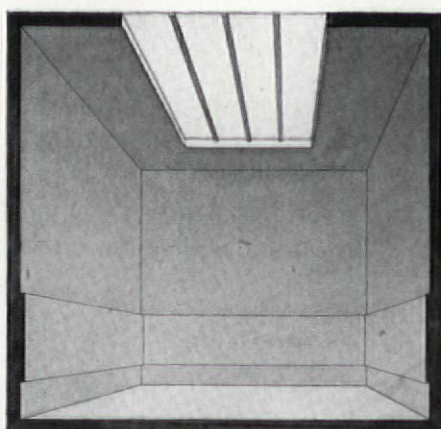
REVERE REVECON SYSTEM of standard extruded structural sections for holding decorative flat sheet materials.

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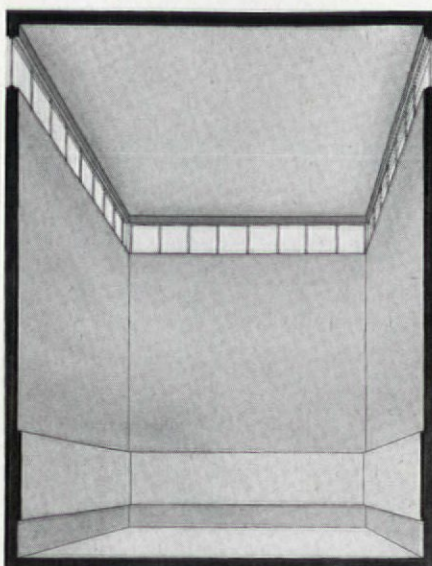
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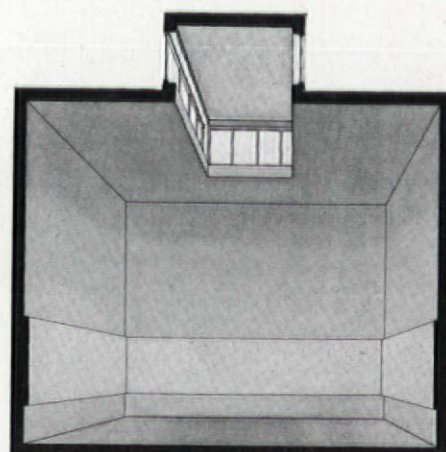
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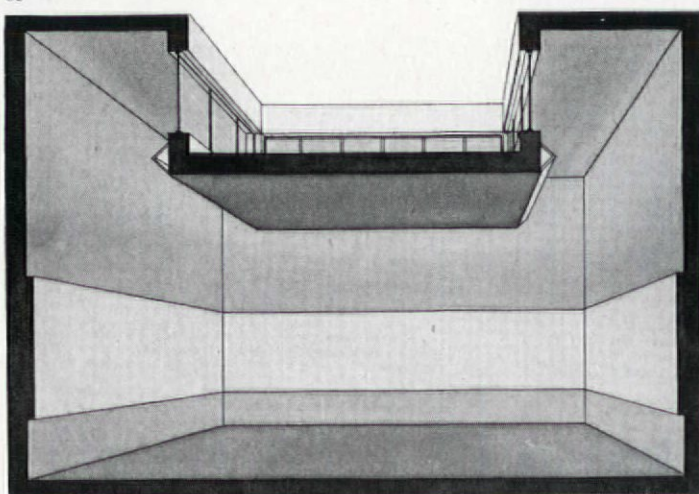


3.

INVERTED MONITORS FOR EXHIBITION LIGHTING

1. HORIZONTAL SKYLIGHT: this is the accepted arrangement for admitting natural light into exhibition rooms. It is poor because most of the light falls on the floor and because excessively high ceilings are required to avoid reflection of the source of the light by the exhibit and because the visible skylight is a source of glare. **2. CLERESTORY:** this arrangement is better because it puts more light on the exhibit, less on the floor. But the ceiling height required, higher even than for skylights, makes it impracticable except in monumental rooms. Visible windows cause some glare. **3. MONITOR:** this is a modified clerestory arrangement which overcomes some of the disadvantages of the clerestory type. It is still much too high, however, and architects dislike using it because of the awkward room shape required. **4. INVERTED MONITOR:** this arrangement, known as the "Seager" system, is claimed to be superior to any natural lighting arrangement for this purpose so far devised. Light is concentrated exactly where it is wanted: on the exhibit. The shape of the room is good and there is no glare.

4.



Seager inverted monitor skylight construction is important more as a new approach to the problem of daylighting than as a new departure in skylight design. While the specific form employed is applicable only to rooms in which it is desirable that most of the light be concentrated on the sidewalls, the basic principle involved, that of locating the windows so that the greatest amount of light falls where it is needed and so that the source of light is outside the general field of vision, may be applied to work of all kinds.

Because no better means of admitting natural light into exhibition rooms have until recently been devised, common practice still is to employ horizontal skylights, in spite of their many well-known disadvantages. Latter-day improvements in artificial lighting have served to underline the deficiencies of current natural lighting practice, with the result that natural light is commonly held in undeserved disrepute.

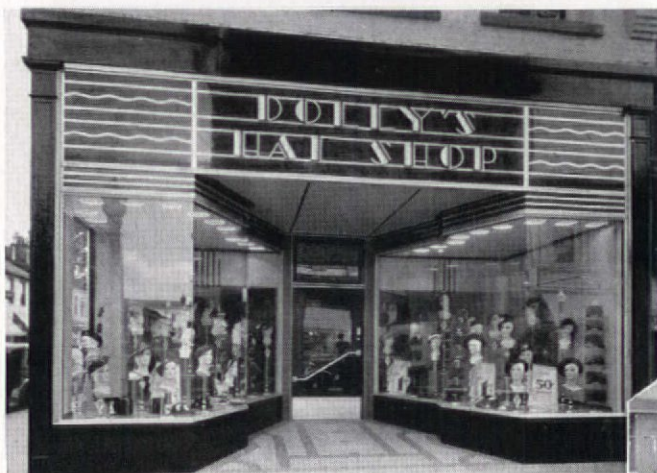
The Seager "inverted monitor" skylight, however, indicates that natural lighting practice is susceptible to the same degree of improvement that the past decade has witnessed in the field of artificial illumination. Since the quality of illumination obtained from natural sources is dependent almost entirely upon fenestration and space relationships, the responsibility for such improvement rests squarely on the architect's shoulders. The window location employed in the Seager system ordinarily results in more light on the upper part of the sidewall than is shown in the illustration. This may be overcome, and the effect illustrated obtained, by painting the portion of the sidewall above the exhibits a darker tone. Because very little light reaches the lower section of the ceiling, it is best that this part of the ceiling be painted a very light tone or white to make it appear of the same value as the balance of the ceiling and the sidewalls.

(Continued on page 48)

THE FORUM is indebted to Mr. Clarence S. Stein for information on the Seager inverted monitor. To readers who are interested in pursuing this subject further, we recommend Architect Stein's excellent article on Museum Lighting in *MUSEOGRAPHIE*, I, publication of the International Museum Office, Madrid Conference, League of Nations International Institute of Intellectual Cooperation.

FORMICA *Peps up*

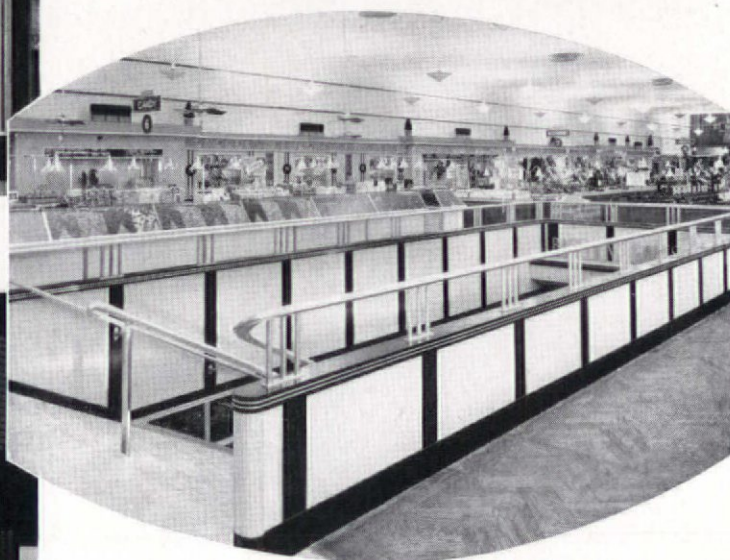
THE INSIDE AND OUTSIDE OF STORES



● Formica store front on one of Dolly's Hat Shops. Leo Abrams, Architect. Installed by Sol, Abrahams & Son Construction Company, St. Louis.



● Hosiery counter with Formica top and base and Formica translucent signs, Famous-Barr, St. Louis. I. E. Safer, Store Architect.



● Stair well, Neisner's, Cincinnati, with Formica paneling.

BOTH the inside and outside of many store buildings have been appropriately modernized by the use of Formica. Chain stores are employing it for wall paneling, soda fountains, lunch counters and store fronts.

The material is smooth and modern; it is available in more than 50 colors, and with inlays in metal or contrasting colors. It is installed with chrome colored trim.

Because of its unusual chemical inertness Formica is extremely durable and easily cleaned. Surfaces finished with it never need to be refinished.

Let us send you the facts.

THE FORMICA INSULATION CO.
4620 Spring Grove Avenue
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FORMICA

FOR BUILDING PURPOSES

gives you **TRUE AIR CONDITIONING** *and* **FULLY AUTOMATIC GAS HEAT**

The rapidly increasing use of gas for domestic and commercial heating, brings to the architect new responsibilities as well as new opportunities. Equipment claims must be weighed carefully. "Air conditioning" does not always mean what it says. The term "automatic" is relative and must be qualified.

As the largest exclusive manufacturers of gas-fired heating equipment in the world, specializing in and building nothing but gas-fired equipment, the makers of Janitrol offer architects, builders and home owners competent and dependable gas heating service.

... PLUS the largest and most advanced line of gas heating equipment ever announced. With true air conditioning ... ample, accurately controlled humidity, and mechanically circulated air in every room.

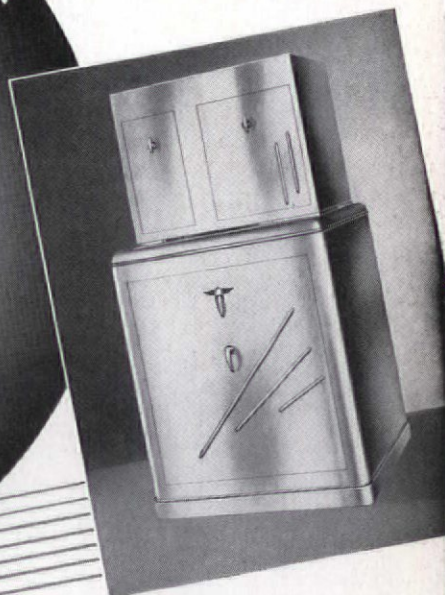
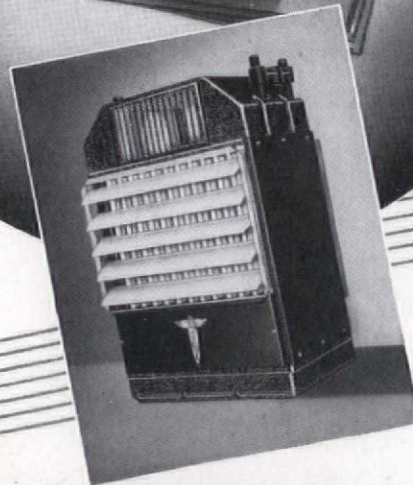
Janitrol gas heater features for 1937 are unique. Combustion principles are advanced. Heat exchange is more rapid. Humidification is improved. Air filtration is more efficient. Temperature control is more sensitive and accurate. Every phase of performance is fully automatic ... more positive and dependable than ever before.

There is a Janitrol gas heating unit for every purpose ... residential and commercial ... air conditioners, gravity heaters, conversion burners and unit heaters. All are time-tested, performance-proven products, of which thousands are in use. For six years, Columbus and Heatmaster units have been a part of the Janitrol line.

Specify Janitrol equipment and use Janitrol engineering service. Your gas company knows Janitrol well ... works closely with Janitrol engineers in equipment selection and installation details. For complete information on the enlarged 1937 Janitrol line, and Janitrol service to architects and builders, call your local Janitrol office or write us direct. Bring your gas heating questions and problems to Janitrol ... "Gas Heat Headquarters."

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S and JANITROL...FULLY AUTOMATIC HEAT for EVERY PURPOSE

IN SERVICE FOR 7 YEARS

at 375 Mosholu Parkway, Bronx, N. Y.

REFRIGERATORS ARE STILL IN FIRST-RATE CONDITION . . . STILL GIVING

EFFICIENT, NOISELESS SERVICE"

—writes J. Billig, New York Builder, who has installed 500 gas refrigerators in his various properties . . . and plans to equip a new 110-apartment building with Air-Cooled Servel Electrolux

"WHICH refrigerator has the lowest maintenance cost? Which refrigerator will give my tenants the utmost satisfaction—in silence and economy? Which refrigerator will continue to provide these advantages after long years of service?"

These are *three* important questions every builder and operator wants answered! Mr. Billig's letter, printed at left, answers them *all*! And his experience during 7 years with the long-life, money-saving performance of Servel Electrolux, the gas refrigerator, is *typical* of the experience of builders and operators the country over.

Today, in Greater New York alone, more than 129,000 Servel Electrolux refrigerators—from 5 to 9 years old—are still "on active duty" . . . still offering the same big maintenance and rental benefits they did when new!

Whether you are choosing refrigerators as new equipment, or to replace other types of refrigerators, it will pay you to get the *facts* about Servel Electrolux . . . to consider carefully the *proof*—based on actual "in service" performance—of the gas refrigerator's lasting efficiency and economy. The new models are on display at your local gas company showroom. See them. Ask any questions. Servel, Inc., Servel Electrolux Sales Division, Evansville, Indiana.



J. BILLIG
REAL ESTATE and BUILDER
1282 SHAKESPEARE AVENUE
BRONX, NEW YORK
Telephone JErôme 6-5888

Northern Union Gas Company
510 East Kingsbridge Road
Bronx, New York

Att: Mr. Merritt

Gentlemen:

I am more than glad to relate my experience with the gas refrigerator, for from the time I installed my first units — about seven years ago — I have had entire satisfaction with Electrolux. I now have approximately five hundred (500) gas refrigerators in my various properties, and my enthusiasm for the unique operation of Electrolux, "no moving parts to wear" is greater than ever. Let me say that if all equipment which goes into apartment houses could be as trouble-free as the gas refrigerator, owners and builders would certainly be relieved of much worry and expense. Very soon I intend to build a new 110-apartment building which, naturally, I plan also to equip with Electrolux.

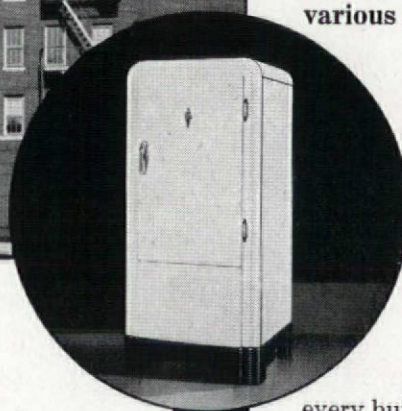
My earliest buildings to be equipped with Electrolux are those at 375 Mosholu Pkwy, 1490 and 1595 and 1601 Macombs Rd., 2141 Holland Ave., and 1282 Shakespeare Ave. — all in the Bronx; and at 10 Park Terrace East in Manhattan. And even the oldest of these refrigerators (now 6 and 7 years old) are still in first-rate condition; still giving tenants efficient, noiseless service!

No wonder I tell friends that as far as I'm concerned the most dependable, economical refrigerator on the market is the gas refrigerator.

Very truly yours,

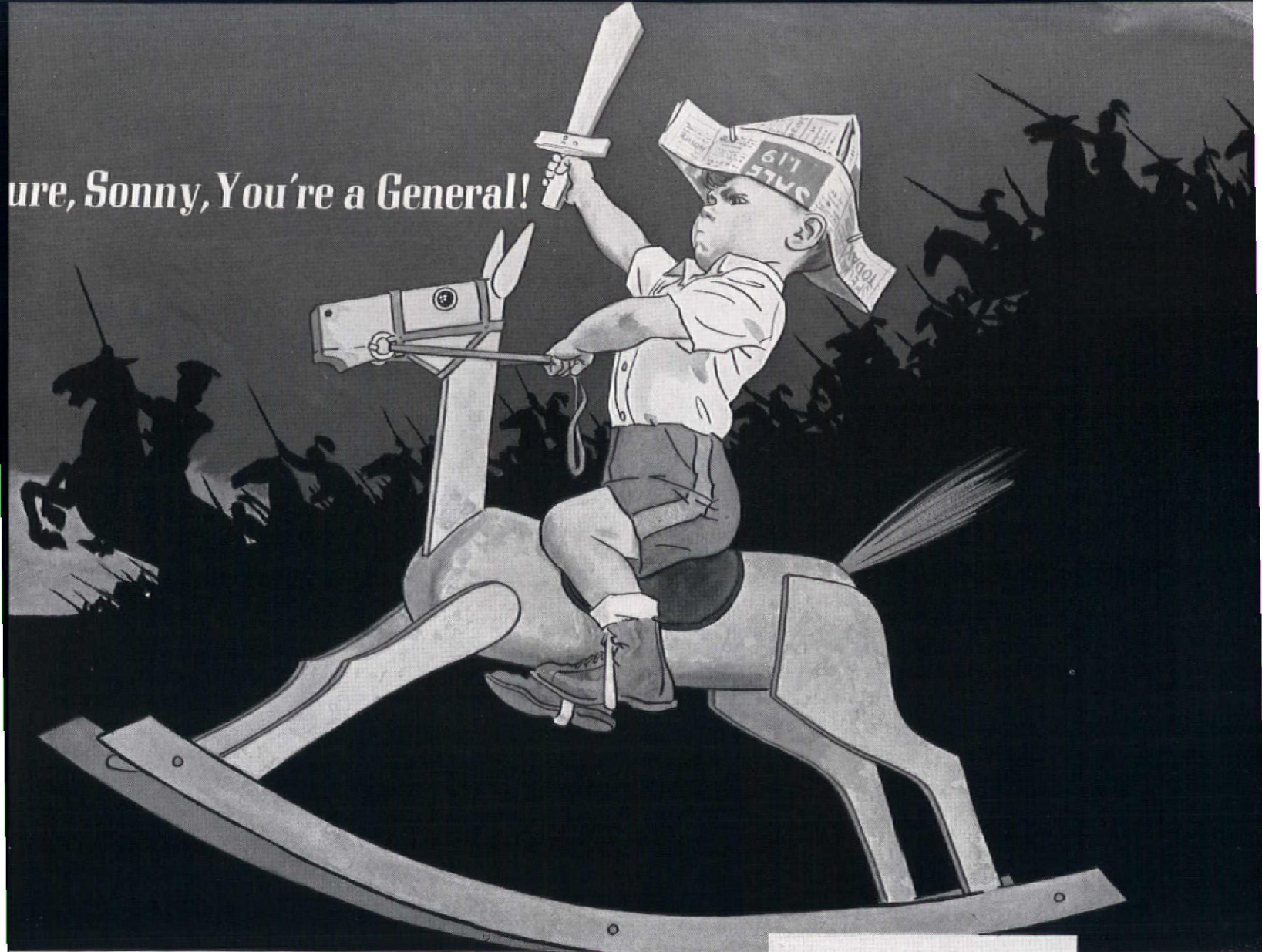
J. Billig
J. Billig

JB:A



SERVEL ELECTROLUX
THE *Gas* REFRIGERATOR

ure, Sonny, You're a General!



There is no substitute for Confidence

ELECTRICAL

CONDUCTORS



U. S. LETTERS PATENT NUMBERS:
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1,798,486 1,410,790 1,536,549

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INSIST UPON GENUINE SAFECOTE
FOR YOUR PROTECTION

BUILT AND TESTED TO SAFECOTE STANDARDS BY THESE LEADING WIRE MANUFACTURERS

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Simplex Wire & Cable Company
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But leadership, be it in product or in man, defies imitators—it draws with a power all its own—it has no substitute.

There is no substitute for SAFECOTE. The electrical conductor that is flame retarding, moisture resisting and fishable, SAFECOTE stands alone, backed by such confidence as only leadership enjoys.

Man's strife for leadership often leads to imitation—his struggle for success frequently ends in substitution. Greatness has ever had many imitators—excellence many substitutes.

The great man never lived whose rivals did not claim equal greatness. No product truly great was ever without its "just-as-goods."

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GEORGE C RICHARDS, LICENSOR'S AGENT • 155 EAST 44th STREET, NEW YORK

HOLLAND HEAT

In New Home of Distinctive Design



VON SCHNARENDORF PHOTO
Courtesy Architectural Forum

Left: Technical excellence of the design of this home in ARDSLEY-ON-HUDSON, N. Y., has won highest approval from authoritative critics everywhere. Even more important, it is sure to win unstinted approval from future occupants because it is so eminently livable. Not the least important factor in its livability is the definite assurance of "perfect heat in every room" provided by Holland circulating warm air heat.

EDWARD STEESE, Architect

Landscaping by JOHN C. JUHRING

Undivided Factory Responsibility a Great Advantage to Architects!

● Through his striking originality of design in the home pictured above, the architect not only gained the applause of fellow architects but has also created for his clients a home in which their satisfaction will never cease to grow. Their appreciation might well be far less than the soundness of design deserves, however, had any less effective provision been made for the owner's comfort, especially with regard to heating.

In specifying a Holland Heating System, the architect made a particularly fortunate choice. Every Holland system is designed from the architect's plans by

Holland's own trained engineer, is installed by Holland's own expert mechanics and is positively guaranteed by the Holland Furnace Company to provide perfect heat in every room. There are no middle men—no division of responsibility. When you specify Holland equipment, you have only the Holland Furnace Company to hold accountable for your client's satisfaction.

But there are many other advantages in Holland Air Conditioning and Heating equipment with which every architect should be acquainted. Mail the coupon for further information.



FREE DATA SHEETS: Mail coupon for set 6 data sheets on New Type-B Holland Air Conditioner. Prepared by Don Graf, B. S., M. Arch., conforming to the Popular "Pencil Points" Series.

HOLLAND FURNACE COMPANY

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World's Largest Installers of Home Heating
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I am interested in the subjects checked below; please rush:

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*With Linoleum and
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floors that reflect the spirit
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In United Air Lines' offices, Chicago, this distinctive floor is Armstrong's No. 19 Green Jasper Linoleum with insets of Plain Linoleum.



Floor in this attractive TWA ticket office, Indianapolis, is Armstrong's Linotile in four different colors. Walls and front of counter are Armstrong's Blue Linoleum No. 29 with Linostrip of Ruby No. 40. Top of counter is Armstrong's Black Linoleum No. 29.

THERE are no restrictions placed on your ideas when you work with Armstrong's Linoleum and Linotile. These modern floors give you absolute freedom in the creation of attractive, interesting designs. They also offer an unusually wide selection of harmonious colors, which are available in grades and gauges for every purpose and every budget.

In addition, Linoleum and Linotile permit you to select practical floors for any interior. Installations in stores, shops, offices, and restaurants—wherever the public walks—prove that Armstrong's Floors last

through years of hard service, provide comfort and quiet, and cut cleaning costs to the bone.

Armstrong's Line of Resilient Floors includes: Linotile, Accotile, Cork Tile, Rubber Tile, and Linoleum. With this complete line, Armstrong's Architectural Service Bureau is in a position to give you valuable, unbiased suggestions on the type of floor best suited to your plans. For full information, see Sweet's, or write now for color-illustrated booklets. Armstrong Cork Products Company, Building Materials Division, 1203 State St., Lancaster, Pa.



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ARCO *Radiant* CONVECTOR

● Now you can specify both. Radiant heat for comfort; concealed radiation for beauty. And get the durability and greater heat-holding capacity of cast iron for extra measure.

Concealed beneath the window, the new Arco Radiant Convector offsets heat loss from the room and the cold of the glass in two ways. (1) With sun-like radiant heat direct from the radiant panel. (2)

warm air between the window and the room.

The convector unit and integral radiant panel are cast iron. The front panel and enclosures are steel. Both together form a unit. They are made for each other, designed to work together for greatest efficiency.

With convected heat flowing from the upper grille and forming a curtain of

CONCEALED RADIATION

WITH SUN-LIKE

Radiant HEAT

...from a New Type of Radiator

THE NEED FOR RADIANT HEAT

What makes people comfortable? Radiant Heat, say scientists and engineers. They tested it.

In specially constructed rooms, with air at the high summer temperature of

104° and walls, ceiling and floor at the cooler temperature of 57° people have been chilly. Yet with air at a much cooler air temperature of about 25° and all walls, ceiling and floor heated to 81° they have been comfortable.

In the first case they received convected heat but lost enough radiant heat to make them uncomfortably cold. In the second, they received radiant heat from the heated walls which made them comfortable in spite of the loss of their body heat by convection.

Heated air alone was not enough to produce real comfort.

A NEW PRODUCT FOR SCIENTIFIC HEATING

It is to meet the need for radiant heat, as well as heated air—and the modern home's demand for concealed heating—that the new Arco Radiant Convector was developed.

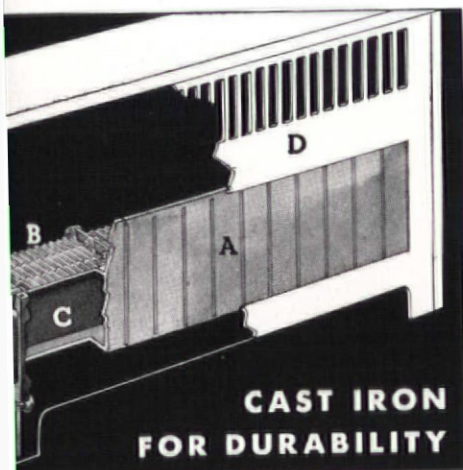
Its radiant panel sends out rays of radiant warmth that travel like the sun's, in straight lines to the people and objects in the room. While from the radiator

grille, usually placed beneath a window, comes a stream of convected heat that makes it possible to sit near a window and still be comfortable. The convected heat also keeps air temperature at the desired level and induces a constant circulation of air in the room.

The Arco Radiant Convector is part of the new American Radiator Conditioning Systems. It is installed like any other radiator in steam, hot water or vapor systems. There are five styles of enclosures for Arco Radiant Convectors which harmonize with all styles of decoration. These enclosures can be made any desired length up to 60 inches. You will find them a great help in providing the new comfort of radiant heat and conditioned air for the homes you plan. The coupon will bring you the complete details and specifications. "Time Saver" standards are also available. Mail the coupon today.

CONCEALED RADIATOR DIVISION

AMERICAN RADIATOR COMPANY
DIVISION OF AMERICAN RADIATOR & STANDARD SANITARY CORPORATION
40 West 40th Street, New York, N. Y.



RADICAL DEVELOPMENT CONCEALED RADIATION

Radiant Panel
Convector Body, finned for maximum air wipe
Chamber for steam or hot water
Arco Enclosure



Radiant Heat—as from the sun—travels at a speed of 6,000 miles a second, directly to the earth, a cooler body.



The Radiant Front sends out rays of radiant heat, just as the sun does, to warm comfortably.



Convected Heat (heated air) comes through the grilles of the new Arco Radiant Convector.

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COUPON TODAY

AMERICAN RADIATOR COMPANY
40 West 40th Street, New York City

Please send me complete facts on the new Arco Radiant Convector. AF-11-36

☐ I am an architect ☐ I am a builder

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ADDRESS _____

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STATE _____

A study of Japanese architecture, written for the Western architect . . . Contemporary small houses in England . . . Furniture and decoration . . . A manual of wood construction and joinery work . . . Woods for paneling and furniture.



A storehouse for imperial treasures, built in 752 A.D. The walls are of triangular beams, uncalked. Contraction of the logs in dry weather allows circulation of air; their expansion seals the building in damp weather.



The remains of the feudal castle in the Imperial Palace grounds. An excellent example of Japanese construction in stone.



The Nishi Hongwanji Temple in Kyoto. The enormous roofs, designed with great simplicity, are among the finest examples to be found in any architecture.

THE LESSON OF JAPANESE ARCHITECTURE, by Jiro Harada. The Studio Publications, Inc., New York. 191 pp., over 150 illustrations. 9 x 11 1/2. \$10.00.

The recent widespread interest in the architecture of Japan, evinced by the publication of a number of excellent books, is not coincidence. It is the result of the growth of the modern movement and of a corresponding realization on the part of Occidental architects that in the traditional domestic architecture of Japan are to be found solutions of some of the most vexing problems in design which face the architect of the present day.

Peculiarly suited to a society vastly different from our own, these solutions are not of a nature which permits their wholesale adoption in the West: their value lies in their concentration on certain aspects of design which, in the past twenty years, have assumed considerable importance.

Tetsuro Yoshida's "Das Japanische Wohnhaus," a superlative study of the Japanese house, published about a year ago,* attracted less attention in America than it deserved because its German text was unintelligible to many. In the present case this disadvantage does not exist. Mr. Harada, of the Imperial Household Museum in Tokyo, an outstanding authority on Japanese art and architecture, has designed his book for the Western reader who is less interested in the history and technical aspects of Japanese architecture than in what it has to offer the modern designer, and the author has developed his theme in crisp and lucid English.

The lesson of Japanese architecture, as summarized by the editor, is standardization, variety in unity, conformity to a mode of living, connection with nature, simplicity, and usefulness to purpose. These, it will be noted, are principles, not sources for copying, and as such can be applied in large part to sound architecture of any time or place. The tendency in the past has been to think of Oriental architecture as a source of entertaining architecture, and the pagoda, least applicable of any of the forms, became a symbol which was adopted for exhibitions and firework displays. A certain healthy influence in painting can be traced to Japanese prints, but it is only recently that the architecture has been accorded importance as a sensitive and completely functional type of building. Our own experiments in modern design have brought about an appreciation of the charm of local materials used creatively rather than imitatively, of the variety that is possible in combination with a standardized plan and type of construction, and of the validity of the open plan as developed over a period of centuries, all characteristic of Japanese building.

To help orient the reader, the book begins with a brief historical resume of Japanese architecture. There follows a section devoted to the larger buildings, such as temples, palaces, castles, pagodas, etc. Brief captions explain the customs and other conditioning requirements which resulted in the features illustrated. There are chapters containing general observations on Japanese architecture, explaining the construction, orientation, planning, and materials used. Unlike our own, the Japa-

*See ARCH. FORUM, Jan. 1936.

(Continued on page 66)

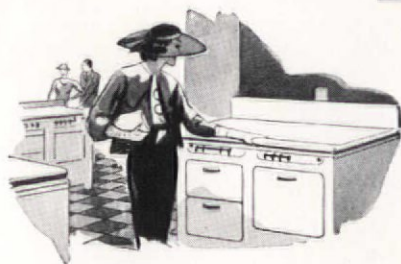


GAS—THE COMMON-SENSE CHOICE

for kitchens you want to stay modern

LIVABLENESS—the intangible quality that is the keynote of modern home design—takes tangible form, comes into the kitchen to *stay* when you specify up-to-date gas appliances.

For their very simplicity virtually guarantees long, trouble-free service from today's gas ranges and refrigerators. The proved economy and dependability of gas have already made it the established fuel in 15,000,000 homes. These time-proved appliances are as attractive in appearance as they are efficient in operation—and continuous development has given them a



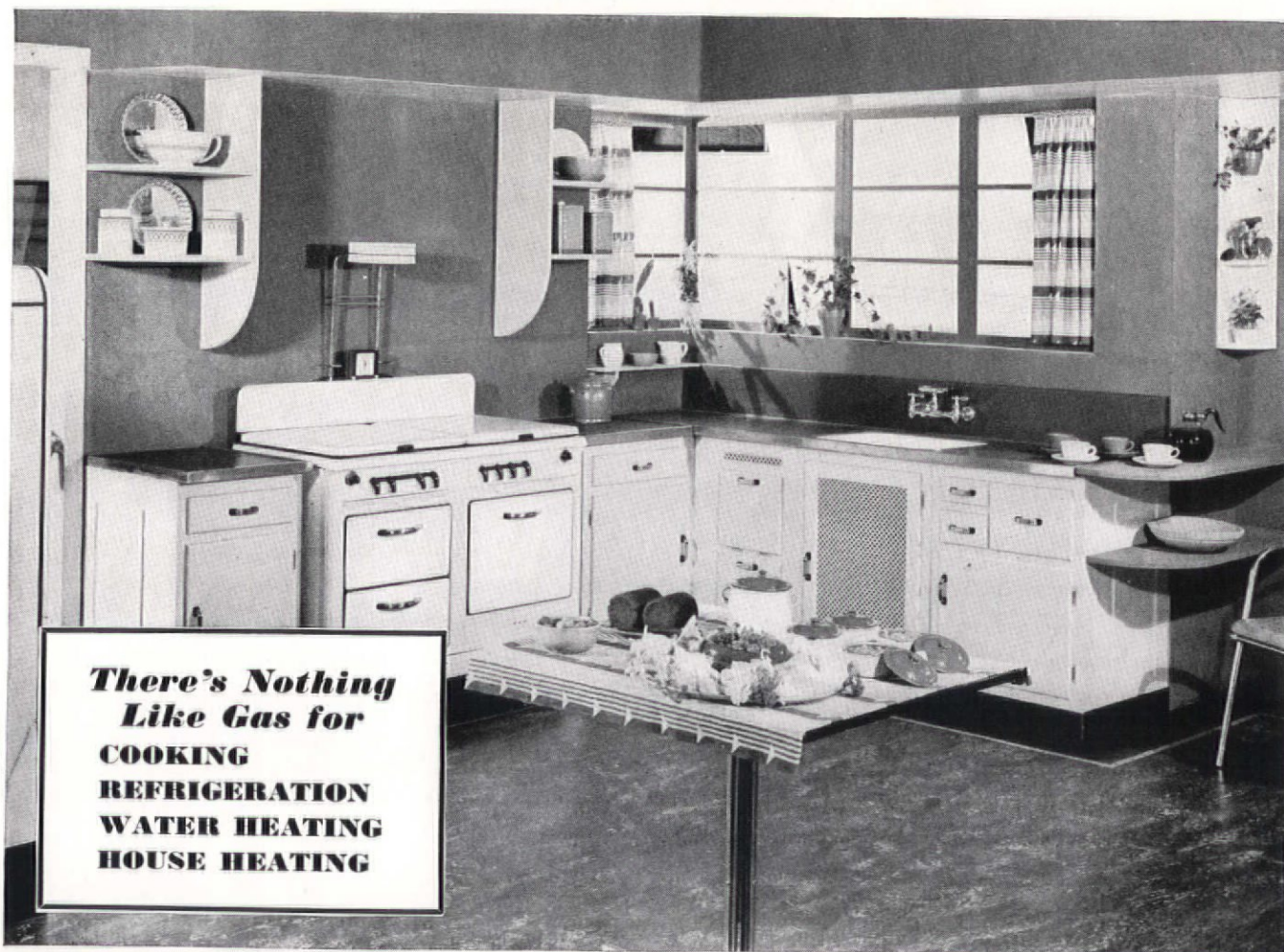
measure of *convenience* undreamed of ten, even five years ago. Automatic lighting, dependable oven heat control, and effective insulation make the gas range of today an economical and *speedy* servant rather than a task-master. And for truly silent, dependable operation, the gas refrigerator is unsurpassed.

This same time-tested dependability

plus the important advantage of truly effortless convenience extends to automatic gas equipment for water-heating and house-heating. And, in addition to its many other advantages, gas brings definite economies to homes completely equipped to use this perfect fuel for every heating need. Your local gas company will gladly cooperate with you in the selection and installation of up-to-date gas appliances.

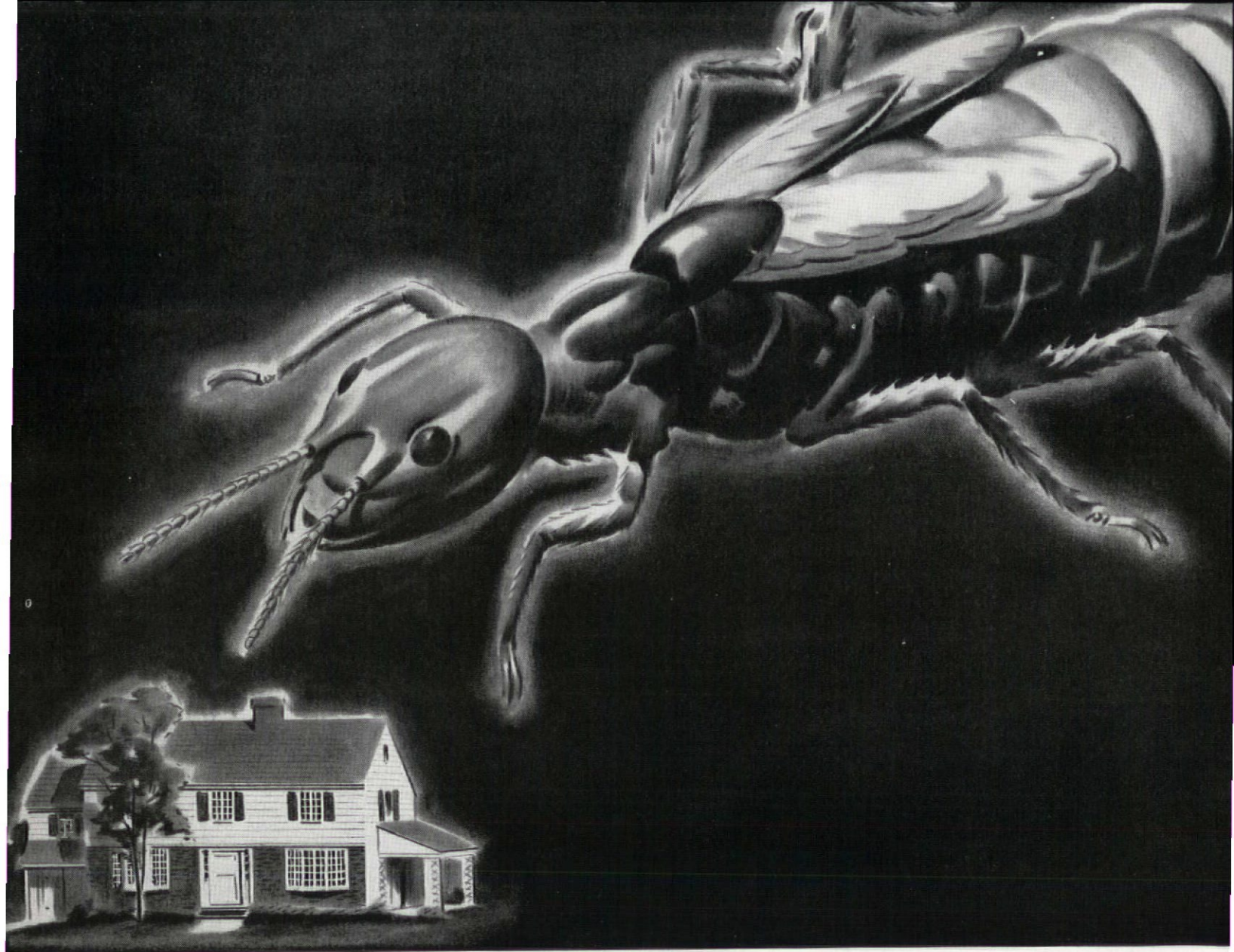


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Model planned kitchen from an advertisement in the Gas Industry's "Modernize Your Home With Gas" campaign in national magazines of 14,000,000 circulation.



STEEL JOISTS ARE NOT ON THE DIET LIST

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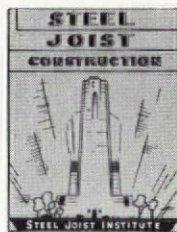
For all light occupancy buildings — such as: residences, apartment houses, office buildings, schools, churches and hotels—open web steel joist construction provides definite advantages.

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shrinking are assured. Erection work is fast, and can be carried on in any weather. Light weight allows economical frame and footings.

These are only some of the ways in which steel joist construction is helping to build more efficient buildings at economical cost. Write today for the new handbook, "Steel Joist Construction." Specify open web steel joists meeting Institute approval.



SEND FOR THIS NEW HANDBOOK

This 36-page book gives useful information—standard specifications for steel joists, standard loading tables, code of standard practice, etc. Send for your free copy today.

(Expanded Type)



OPEN WEB

STEEL JOIST CONSTRUCTION

(Welded Type)

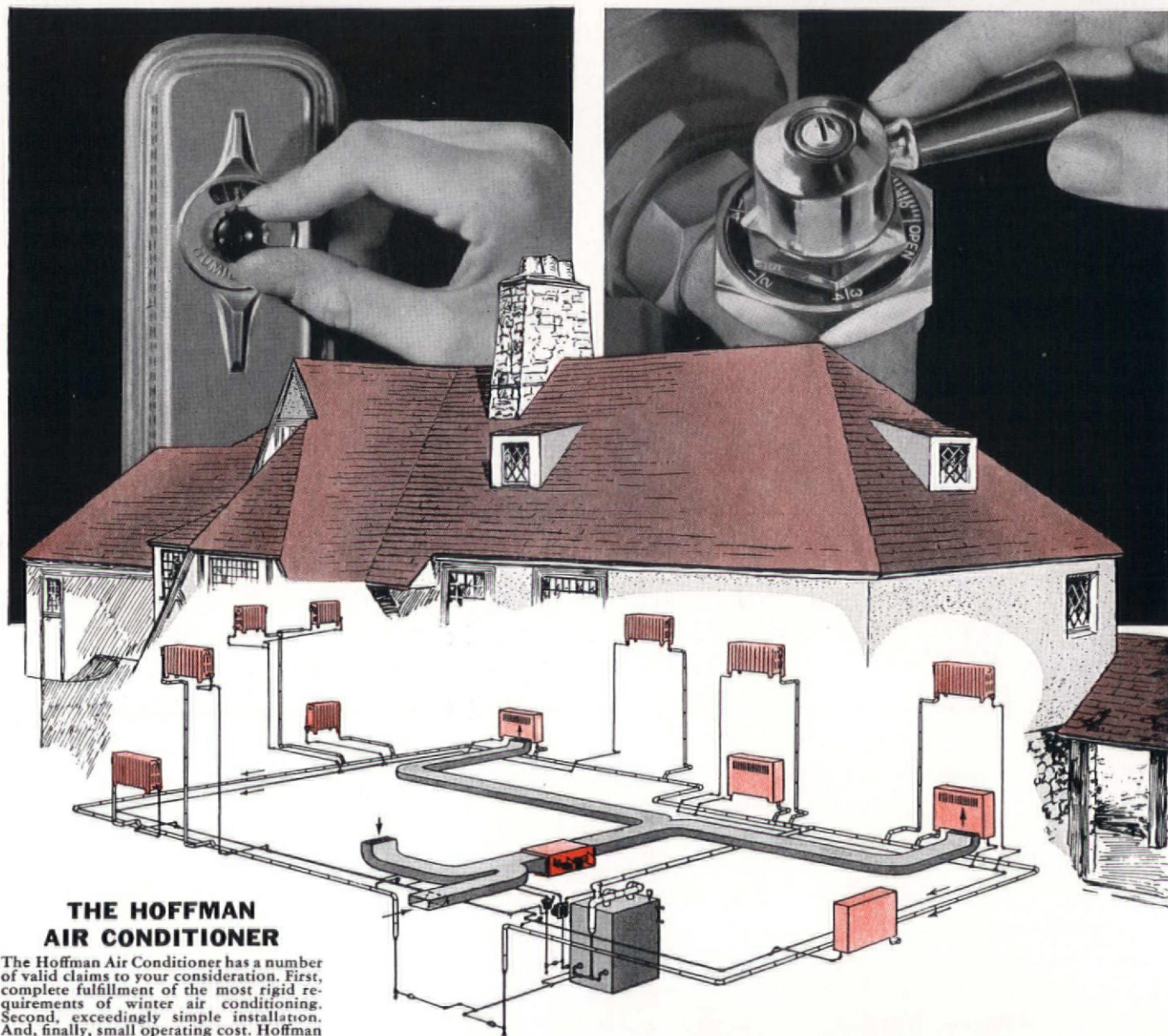
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HOFFMAN

CONTROLLED HEAT *with* **AIR CONDITIONING**

THE

Proprietor

EATS IN ANOTHER RESTAURANT

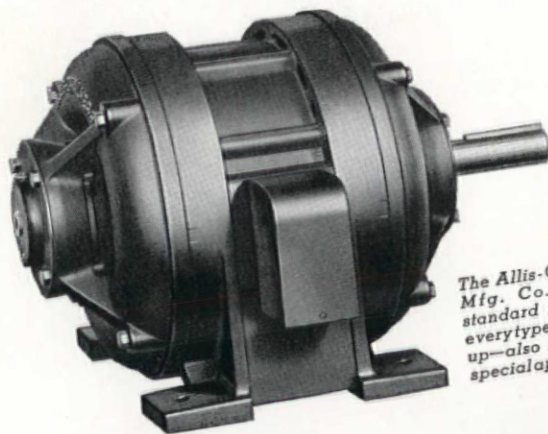


IT'S an old quip . . . about the restaurant proprietor who steps out for his lunch. But its implication is deadly—he doesn't eat his own food.

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LETTERS

Competitions for Public Works

Forum:

... I do not believe that competitions serve any useful purpose, as the design of the building as expressed in competitive drawings is only one factor.

Architects can be selected for distinguished buildings without having to resort to competitions. The mere fact that politicians as a rule are not competent to make the selection, or are prone to base their selection on qualifications besides merit, does not, in my opinion, justify an architectural competition, with all its weaknesses...

GORDON B. KAUFMANN

Los Angeles, Calif.

Last month a new and bitter note entered the controversy which continues to boil over the selection of architects for public works when New York's Governor Herbert Lehman designated the State Architectural Bureau to design the new War Memorial Building. Follows excerpts from a forthright letter to the Governor signed by the heads of every professional body in the State:

"... We had entire confidence that you, whom we know to be a gentleman of culture and broad understanding in addition to your abilities as leader and administrator, would not be unmindful of your responsibility to see that this great monument, paid for by public subscription and dedicated by the people of the State to such a high purpose, should represent the best efforts of the greatest creative artists of our community..."

"This situation called so obviously for the selection of the best possible talent among architects, painters and sculptors by competition or otherwise—the winners to design the memorial, in association perhaps with the Department—that this latest triumph of Bureaucratic domination of the arts is viewed with deep concern by many elements of the community..."—Ed.

Colonial Curse

Forum:

... Unfortunately a great part of the building, done (in Britain) by large building concerns, is the most hideous type of construction and as bad as our own "English style" houses on Long Island that combine on one facade slate, brick, shingles, half timber, stucco, rubble and broken glass—this last sometimes beautifully iridescent. These no doubt appeal to the British public just as their American cousins appeal to the American public and are sold before they are even finished.

As to the better type of building in England, designed by architects (about 10 per cent of the building), the costs are naturally higher, as they are here, and the design on the whole is good and frequently shows more independence than we are apt to show. This may be because they are not cursed with the "Colonial" heritage and even in their modernistic work manage to retain something of

Georgian proportions. This I myself find very commendable...

EDWARD STEESE

New York, N. Y.

Britain's building boom was examined minutely in August and September, 1936, issues of THE FORUM.—Ed.

Meadville Architects

Forum:

... Preliminary planning for the housing in Meadville, Pa., was made by Catherine Bauer, Secretary to the Labor Housing Conference, Kastner & Stonorov, planning consultants, some two years ago. The architectural work, I understand, has been planned by a local architect. There is no desire on my part to identify myself with or take any credit for the work apparently in progress now...

ALFRED KASTNER

Resettlement Administration
Washington, D. C.

THE FORUM stands corrected. Federal Housing Administration designates as architects for this project the Meadville firm of E. A. and E. S. Phillips.—Ed.

Rent to Space

Forum:

On p. 452 of your June, 1936, issue is found a sample computation as a financial factor in your "Rent to Space" method of computing the capital cost of the housing project.

No. 3 deals with amortization. I note that in your sample you use an amortization rate of 1.5 per cent. I am writing to ask how long it would take a borrower to pay out at that rate, presuming the interest rate, as you did in No. 2, to be 5 per cent.

The FHA and the local banks have no tables which compute the amortization at that rate...

FRANK M. ROBERTS

Ottumwa, Iowa

The amortization rate of 1½ per cent used as an illustration in "From Rent to Space" would pay off a loan in 30 years with an interest rate of 5 per cent. This is based on the assumption that equal annual total interest and amortization payments will be maintained over the entire period. That is, as the amount of interest decreases, due to reduction in the capital amount of the loan, the amount of amortization will be increased by the same amount. While the FHA does not insure mortgages on single houses which have more than twenty years to run, it is not so limited on mortgages covering large scale operations. The example shown in "From Rent to Space" covers a type of operation which might be acceptable to the FHA's Large Scale Operations Division.—Ed.

Forum:

... As a guide book for architects it is extremely valuable in indicating the methods of analysis of large rental projects. Starting with a thorough knowledge of the particular housing needs for a given locality and group of people, and proceeding from the determination of the rental which such a group could pay to the development of the plans themselves, it emphasizes

the importance of the economic considerations which must precede what is ordinarily considered as the architect's work.

It should also be extremely useful to promoters and financiers in indicating the limitations imposed by the basic economics of housing upon the quality of the accommodation provided. I know of no other treatise in which the problem of housing is approached more scientifically, or a method of arriving at a solution more thoroughly worked out.

I understand that the authors drew upon the experience of the Large Scale Housing Division of the Federal Housing Administration in developing the articles, which makes us here very proud, and they and you are to be commended for the original and thorough way in which the material is presented...

STEWART McDONALD, Administrator
Federal Housing Administration
Washington, D. C.

Forum:

... I think the document is worth keeping in our real estate files so it can be made available to all members of the Real Estate Department. It contains a great deal of information of value, not alone to architects, but to engineers and real estate engineers who do renovating, etc....

DARWIN JAMES, President
East River Savings Bank
New York, N.Y.

Forum:

... I consider these articles by far the most able and comprehensive exposition of the development of a housing project which I have yet seen. In fact, I should be inclined to go further and state that they comprise the only rounded treatise of which I am aware.

They cannot fail to impress the architects of this country with the idea that housing is somewhat more than the repetition of small and easily designed units...

A. R. CLAS, Asst. Administrator
Federal Emergency Administration of
Public Works
Washington, D. C.

Forum:

... Articles of this highly technical type are nothing for the 10 cent magazines that are read by junior clerks on the subway, but I think that they are highly valuable in our effort to build up a rational technique in a type of architectural, real estate, and financial transaction that has been sadly lacking in sound practice...

EUGENE H. KLABER, Asst. Director
FHA, Large Scale Housing Division
Washington, D. C.

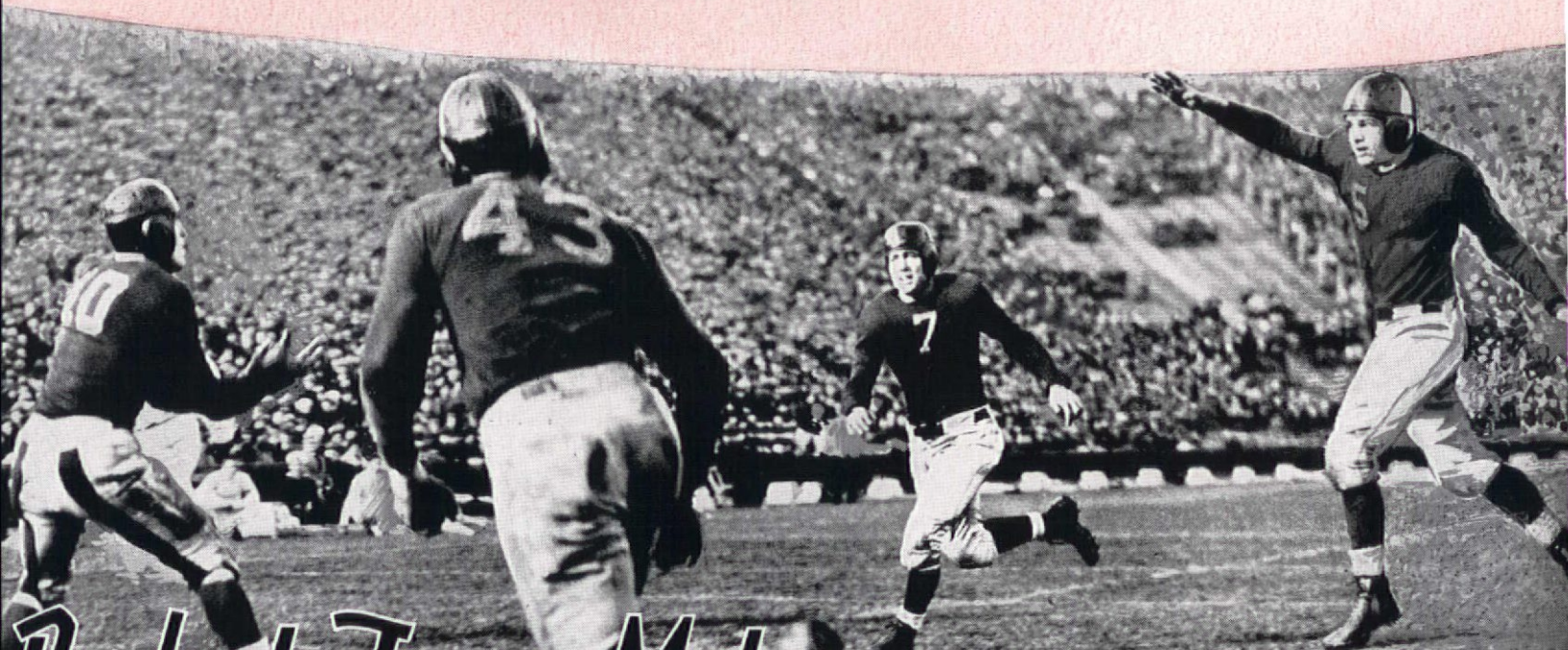
Forum:

... it is high time, I believe, that the cultural mission of architecture in these perturbing times should be stressed again and again. Architecture serves every day needs. Posterity, after all, decides about

(Continued on page 62)

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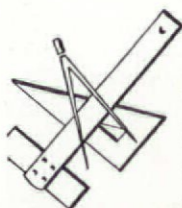
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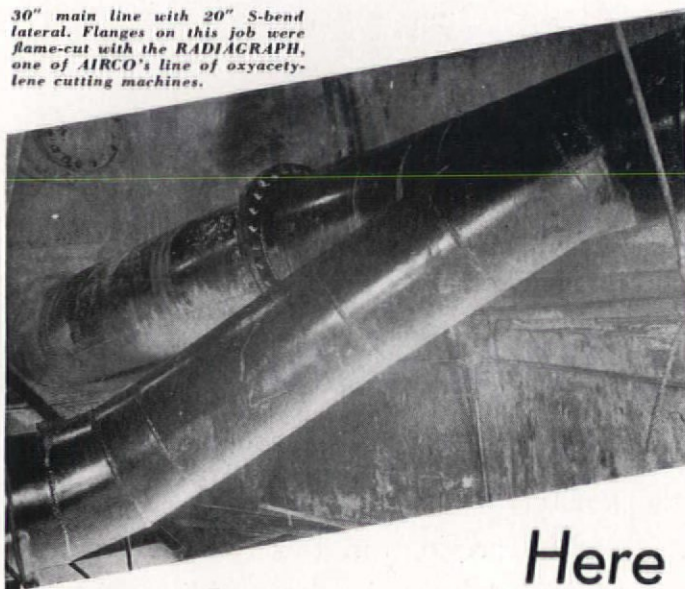
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30" main line with 20" S-bend lateral. Flanges on this job were flame-cut with the **RADIAGRAPH**, one of AIRCO's line of oxyacetylene cutting machines.



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advantages of welded piping will be secured to the maximum.

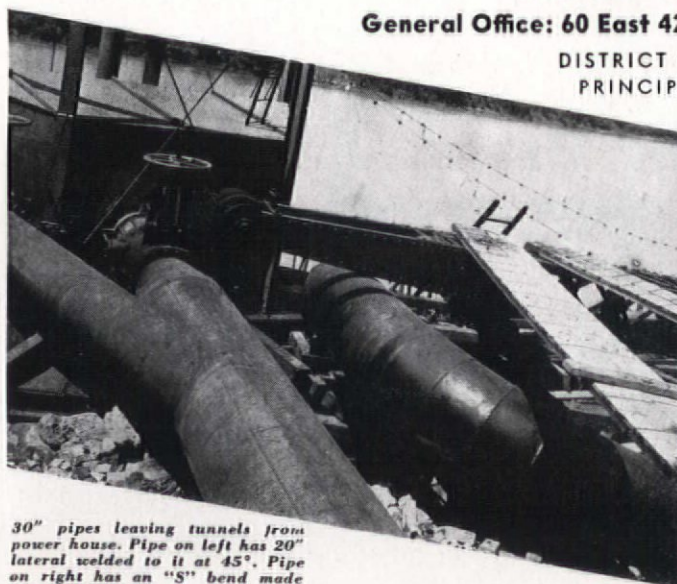
A recent example is the half-million dollar project of the St. Joseph Railway, Light, Heat & Power Co. for enlarging and improving its power house at St. Joseph, Mo., some views of which are shown through the courtesy of Mr. Brock, General Superintendent of Construction, and Mr. Granger, Pipe Foreman.

Architects, engineers and piping contractors are invited to call upon AIRCO for information about pipe welding and for assistance in preparing welded piping specifications. Write us.

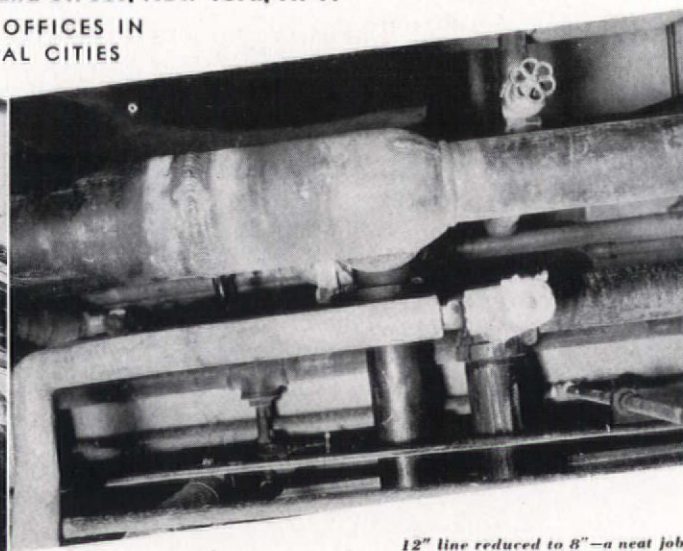
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30" pipes leaving tunnels from power house. Pipe on left has 20" lateral welded to it at 45°. Pipe on right has an "S" bend made of welded sections.



12" line reduced to 8"—a neat job, readily done with welding.

1937 SMALL HOUSE PREVIEW

When 11,207 people set down in great detail exactly what they want in a house, the importance of these facts to planners, builders, and financiers of houses needs no embellishment. Such a body of facts has now been collected, is presented herewith.

In publishing the results of this unprecedented survey, THE ARCHITECTURAL FORUM pays tribute to the Niagara Hudson System (operating public utility companies which embrace the territory between the Hudson River and Niagara Falls) which initiated and is carrying out this realistic program to define the new standards for today's house. The data published in this issue were compiled from replies to a questionnaire prepared by THE FORUM's editors and distributed to a quarter of a million customers of the Niagara Hudson System.

As the focal point of its "Five Star" program, Niagara Hudson, in collaboration with AMERICAN HOME, WOMEN'S HOME COMPANION, and BETTER HOMES AND GARDENS, and local architects, will design and build for exhibition three houses, one in Albany, one in Syracuse, one in Buffalo, exhibiting requirements established by the survey.

Accompanying the tabulation of the data, which has been organized by price groups, THE FORUM presents a plan for a composite house in the \$8,500 class. This composite should be viewed as a literal rather than an architectural interpretation of the survey's findings. This is followed by critical comment and, finally, by a portfolio of fifty recently built houses which show a variety of contemporary solutions to many of the problems exposed in the survey.

The survey offers much room for speculation and study. While some of the data undoubtedly reflect purely local preferences, for the most part the findings are of national significance. Two facts stand out most clearly: first, the woman who has been emancipated from the back-breaking drudgery of housework now serves notice that she will insist on even greater conveniences and comforts than in the past; second, advocates of new ideas in planning still have a long way to go to convince the public of the superiority of basic changes from long-accustomed room arrangements. It will probably take a decade of evolution to break down some of these fixed ideas, so deeply rooted in the past are they. This is a challenge which should be met, not by words, but by building houses whose planning is as advanced as the standard of home equipment today.

11,207

replies to the questionnaire had been received at the time THE FORUM went to press. These were first divided according to price class into groups. In the largest group were those who expected to pay between \$7,000 and \$8,500 for the house and lot. These groups were next subdivided into sub-groups showing the amount of cash payment which those answering the questionnaire were prepared to make and the number of years they would want to pay off the balance.

THE replies were also divided into groups of those now renting homes and those who are now home owners and those who do and those who do not expect to build or buy a home within the next two years.

PRICE CLASS [PRICE THEY WILL PAY FOR HOUSE AND LOT]	Not Given	Under \$5,000	\$5,000 - \$6,000	\$6,000 - \$7,000	\$7,000 - \$8,500	\$8,500 - \$10,000	\$10,000 - \$15,000	Over \$15,000	TOTAL	PER CENT OF TOTAL
PERSONS	786	1,917	2,145	1,236	2,264	1,920	705	234	11,207	
PER CENT	7%	17%	19%	11%	20%	17%	7%	2%		100%

DOWN PAYMENT

UNDER \$1,000	6	60	28	15	15	10	3	1	138	4%
\$1,000 To \$2,000	14	347	358	172	187	118	13	6	1,215	34%
\$2,000 To \$3,000	5	84	214	129	184	166	25	6	813	23%
\$3,000 To \$4,000	3	48	103	64	142	112	35	2	509	14%
\$4,000 To \$5,000	2	12	24	19	75	67	13	2	214	6%
\$5,000 To \$6,000	8	33	22	15	64	141	79	28	390	11%
\$6,000 and OVER	2	4	31	13	36	70	63	34	253	7%

YEARS TO PAY

UNDER 10 YEARS	34	212	227	126	282	258	112	37	1,288	28%
10 TO 15 YEARS	28	317	432	221	349	337	109	23	1,816	40%
15 TO 20 YEARS	27	311	335	176	272	223	77	20	1,441	32%

RENTERS—HOME OWNERS

NOW RENT	371	1,190	1,300	696	1,262	955	318	86	6,178	58%
NOW OWN	311	635	780	477	906	883	372	143	4,507	42%
% RENTERS	54%	65%	62%	59%	58%	52%	46%	38%		

MAY BUILD—WON'T BUILD

MAY BUILD	62	470	484	222	380	326	125	46	2,115	21%
WON'T BUILD	572	1,270	1,490	903	1,742	1,472	547	172	8,168	79%
% BUILDERS	10%	27%	33%	20%	18%	22%	19%	21%		

PREFERRED LOCATION. Overwhelming preference for the outlying residence section was indicated. 95% expressed a desire to live either in an outlying residence section or beyond city limits. Less than 5% chose to live near the main business section.

CLOSE-IN	45	134	89	45	77	60	29	16	495	4½%
RESIDENCE SECTION	366	930	1,271	793	1,495	1,262	447	143	6,707	61%
FURTHER OUT	165	828	774	388	677	587	238	73	3,730	34%

BOLD FACE TYPE IS USED THROUGHOUT TO EMPHASIZE DOMINANT VOTES

FAMILY SIZE. The typical family was found to consist of an adult couple having one or two children, if these groups are considered together; but the largest single classification was two adults with no children. Significant was the fact that less than 4% of those in the price class below \$8,500—and only 6% of those below \$10,000—needed a servant's room.

	2 adults no children	2 adults 1 child	2 adults 2 children	2 adults 3 children	2 adults 4 children	TOTAL in these groups	% of grand total
FAMILY GROUPS	2,029	1,226	1,079	357	86	4,777	43%
% OF GRAND TOTAL	18%	11%	10%	3%	.7%		

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
1 ADULT		13	44	36	20	35	41	11	3	203	2%
2 ADULTS		284	1,144	1,232	682	1,137	924	340	133	5,876	52%
3 OR MORE		266	647	819	493	1,046	912	355	96	4,634	41%
1 BOY		111	478	508	301	507	469	179	69	2,622	23%
2 OR MORE		86	325	279	153	303	253	113	51	1,563	14%
1 GIRL		113	478	496	314	524	471	164	51	2,611	23%
2 OR MORE		82	280	285	133	273	243	97	44	1,437	13%
1 SERVANT		50	31	71	64	130	260	209	88	903	8%
2 OR MORE		12	15	16	4	10	33	43	43	180	1½%

PET PEEVES. "Not enough closet space," "not enough electrical outlets" and "can't heat rooms evenly" proved to be the pet peeves of most of those answering the questionnaire. Peeves are listed below in their order of importance as determined by the tabulation, each of the voters having named the five worst.

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL
1. NOT ENOUGH CLOSET SPACE		372	1,121	1,297	697	1,320	1,109	415	134	6,465
2. NOT ENOUGH ELEC. OUTLETS		349	1,086	1,217	701	1,255	1,006	350	91	6,055
3. CAN'T HEAT ROOMS EVENLY		298	988	1,124	603	1,079	856	319	88	5,355
4. POOR KITCHEN ARRANGEMENT		201	679	741	414	773	630	214	71	3,723
5. HOUSE DRAFTY		181	598	581	304	555	468	159	41	2,887
6. CAN'T ARRANGE FURNITURE		156	444	551	342	644	501	179	46	2,863
7. NOT ENOUGH SUNLIGHT		111	436	449	251	497	421	123	48	2,336
8. NO PLACE TO KEEP TOYS		92	400	441	224	401	322	128	42	2,050
9. POOR HOT WATER HEATER		115	276	386	255	424	369	130	40	1,995
10. GARAGE DOOR DOESN'T WORK		82	203	290	215	377	319	143	47	1,676
11. HOUSE HARD TO CARE FOR		97	315	316	171	358	278	85	26	1,646
12. TOO SMALL REFRIGERATOR		92	235	273	171	307	328	115	57	1,578
13. DRAIN PIPES CLOG		70	218	297	180	333	252	111	43	1,504
14. LIGHTING FIXTURES GLARY		68	218	250	155	269	248	87	34	1,329
15. RAIN WATER FLOODS BASEMENT		81	241	249	144	267	200	96	32	1,310
16. GARAGE TOO SMALL		43	162	191	129	229	221	89	37	1,101
17. PIPES RUST		56	184	196	93	167	276	66	16	1,054
18. DARK HALLS AND STAIRWAYS		43	181	186	116	244	185	55	30	1,040
19. SCREENS RUST		23	99	119	72	97	109	33	12	564
20. WATER FLOWS POORLY		30	89	106	63	108	90	34	17	537

ARCHITECTURAL SERVICE. "If you were planning to build a house, whom would you go to first?" 4,752, or 45% answered: "To an architect." The next larger group chose the builder, next the realtor, and so on in the order given below. It is notable that even in the price class below \$5,000 the architect was placed first of all.

PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
ARCHITECT	245	594	789	510	1,019	1,030	422	143	4,752	45%
%	54%	33%	38%	43%	46%	55%	60%	63%		
BUILDER	52	349	416	221	356	245	77	13	1,729	16%
%	12%	19%	20%	19%	16%	13%	11%	6%		
REALTOR	50	184	258	153	288	287	97	42	1,359	13%
%	11%	10%	13%	13%	13%	15%	14%	19%		
BLDG. & LOAN	53	370	299	160	268	130	32	7	1,319	12%
%	12%	20%	15%	13%	12%	7%	5%	3%		
BANKER	35	188	234	113	216	150	69	19	1,024	10%
%	8%	10%	11%	10%	10%	8%	10%	8%		
SUPPLY DEALER	15	106	56	22	39	16	5	2	261	2½%
%	3%	6%	3%	2%	2%	1%	1%	1%		

COMMENTS. Besides the answers to the various questions contained in the questionnaire, more than 2,000 comments were received. These are especially significant in view of the fact that they evidently represent features particularly dear to the heart of the home-buying public. Strangest request was for an Aviary, and foremost in point of numbers was the demand for a fireplace in the living room. Next in this order came open porch, laundry chute, cedar closet and sun porch. Figures for the five commonest comments are given below. Percentage figures are per cent of total comments.

FEATURE DESIRED	NUMBER OF PERSONS	PER CENT
FIREPLACE	531	25%
OPEN PORCH	260	12%
LAUNDRY CHUTE	116	5½%
CEDAR CLOSET	92	4½%
SUN PORCH	78	4%

THE HOUSE. The balance of the questionnaire dealt specifically with the house itself. In order to show graphically what the 1937 home-buying public thinks it wants—to concretize the 1937 Small House Preview—the editors of THE FORUM present a house having all of the features which those answering the questionnaire felt that their home *must* have, and as many of the things which they said they would like to have as seemed even remotely possible within the price range specified by the largest group. To the hypothetical architect or builder who is able to build the public's FIVE STAR house for \$8,500 should come, on the basis of the questionnaire, a hypothetically unlimited amount of business. And to the flesh-and-blood architect or builder who is able to give the 1937 buying public a good many of the things which it wants at something like the price it is prepared to pay should come the lion's share of the flesh-and-blood business.

POSITION ON LOT. The home-buyer wants, first of all, a house set in the middle of the lot. Less than 20% are prepared to accept a house located at the front of the lot with the living rooms facing the rear. Tabulated returns indicate that this preference is independent of price class division.

PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
FRONT OF LOT	104	501	441	224	363	298	126	44	2,101	19%
MIDDLE OF LOT	434	1,297	1,565	913	1,739	1,476	517	160	8,101	75%
REAR OF LOT	33	86	100	75	130	115	58	28	625	6%

BASEMENT. The majority called for a basement under the entire house, and a basement laundry. Almost 80% wanted a basement recreation room, and 20% of these felt that they must have such a room. The majority also felt that they must have a storage room for fruits and vegetables in the basement.

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
FULL BASEMENT		507	1,517	1,721	974	1,822	1,511	564	178	8,794	80%
PARTIAL BASEMENT		79	257	306	200	323	303	109	40	1,617	15%
NO BASEMENT		30	99	91	42	93	84	37	11	487	5%

RECREATION ROOM

MUST HAVE	92	208	306	228	453	507	241	91	2,126	20%
WOULD LIKE	355	1,017	1,260	722	1,377	1,114	355	100	6,300	59%
NOT NEEDED	151	598	499	247	383	257	110	35	2,280	21%

LAUNDRY

IN BASEMENT	483	1,531	1,726	1,004	1,833	1,556	558	182	8,873	82%
FIRST FLOOR	129	273	330	175	337	283	117	38	1,682	16%
NONE	10	46	38	29	46	40	27	12	248	2%

FRUIT & VEGETABLE ROOM

MUST HAVE	294	964	1,136	686	1,224	1,059	393	122	5,878	55%
WOULD LIKE	275	743	787	420	803	643	245	72	3,988	37%
NOT NEEDED	44	124	148	92	162	167	62	34	833	8%

HEATING. Besides listing "Can't heat rooms evenly" third among their "pet peeves," most of those answering the question had a good idea of what sort of heating plant they must have in their next home—one which provides thermostatic control and means for circulating the air. In addition, they would like to have other features of air conditioning.

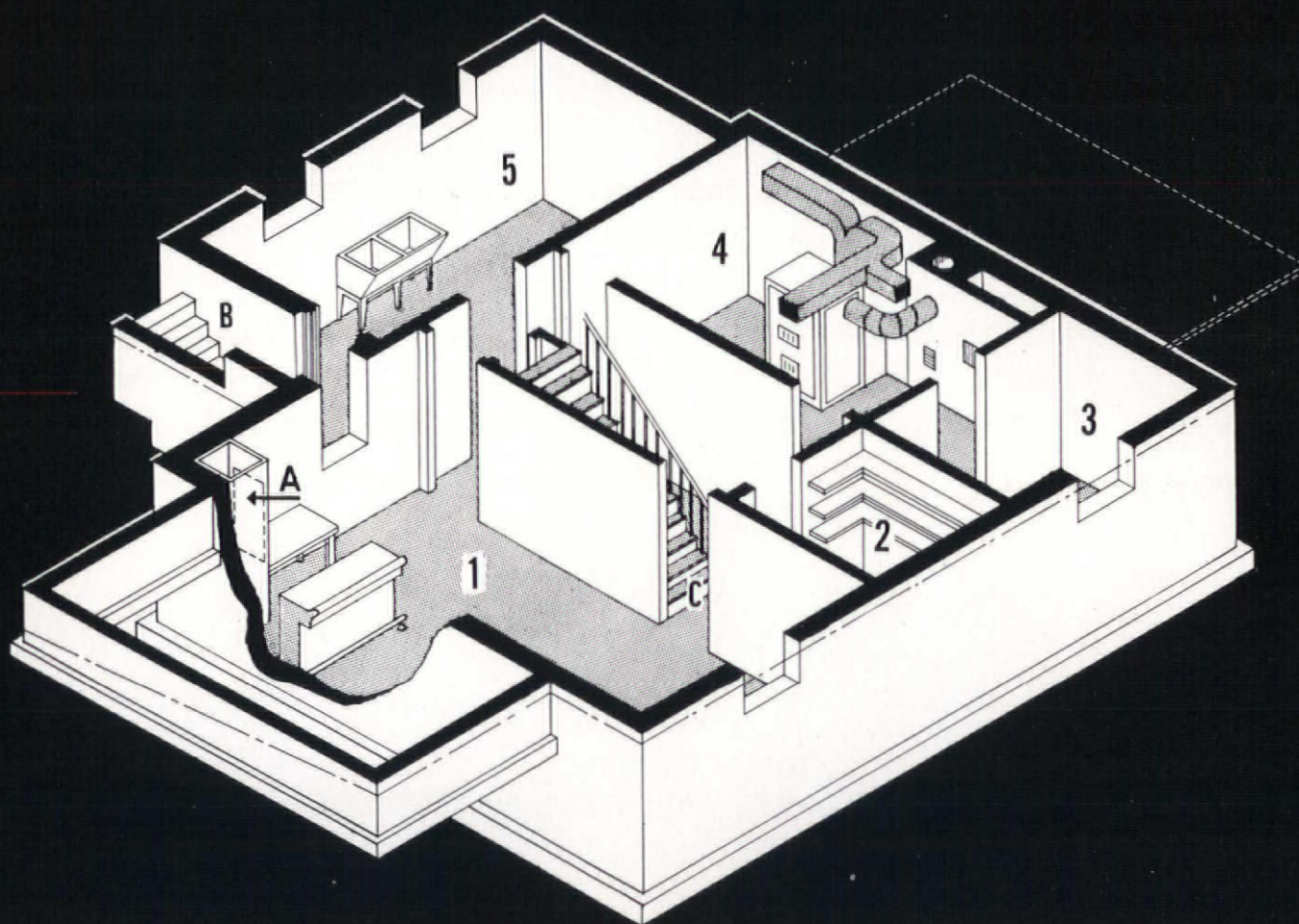
THERMOSTATIC CONTROL

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
MUST HAVE		270	604	911	633	1,180	1,174	522	177	5,471	50%
WOULD LIKE		409	1,170	1,128	548	995	701	176	48	5,175	47%
NOT NEEDED		30	80	56	25	40	22	12	3	268	3%

AIR CONDITIONING

MUST HAVE	148	360	509	331	652	684	314	119	3,117	30%
WOULD LIKE	460	1,291	1,429	788	1,430	1,091	366	92	6,949	65%
NOT NEEDED	34	124	98	56	79	62	14	11	478	5%
1. CIRCULATION	389	1,113	1,225	809	1,307	1,098	408	115	6,464	48%
2. COOLING	198	541	685	319	630	506	172	61	3,112	23%
3. FILTERING	149	445	518	351	638	542	220	65	2,928	22%
4. HUMIDIFYING	49	142	179	94	216	169	61	16	926	7%

- 1. RECREATION ROOM
- 2. FRUIT AND VEGETABLES
- 3. FUEL
- 4. HEATER
- 5. LAUNDRY
- A. DUMBWAITER
- B. AREAWAY
- C. STAIR HALL

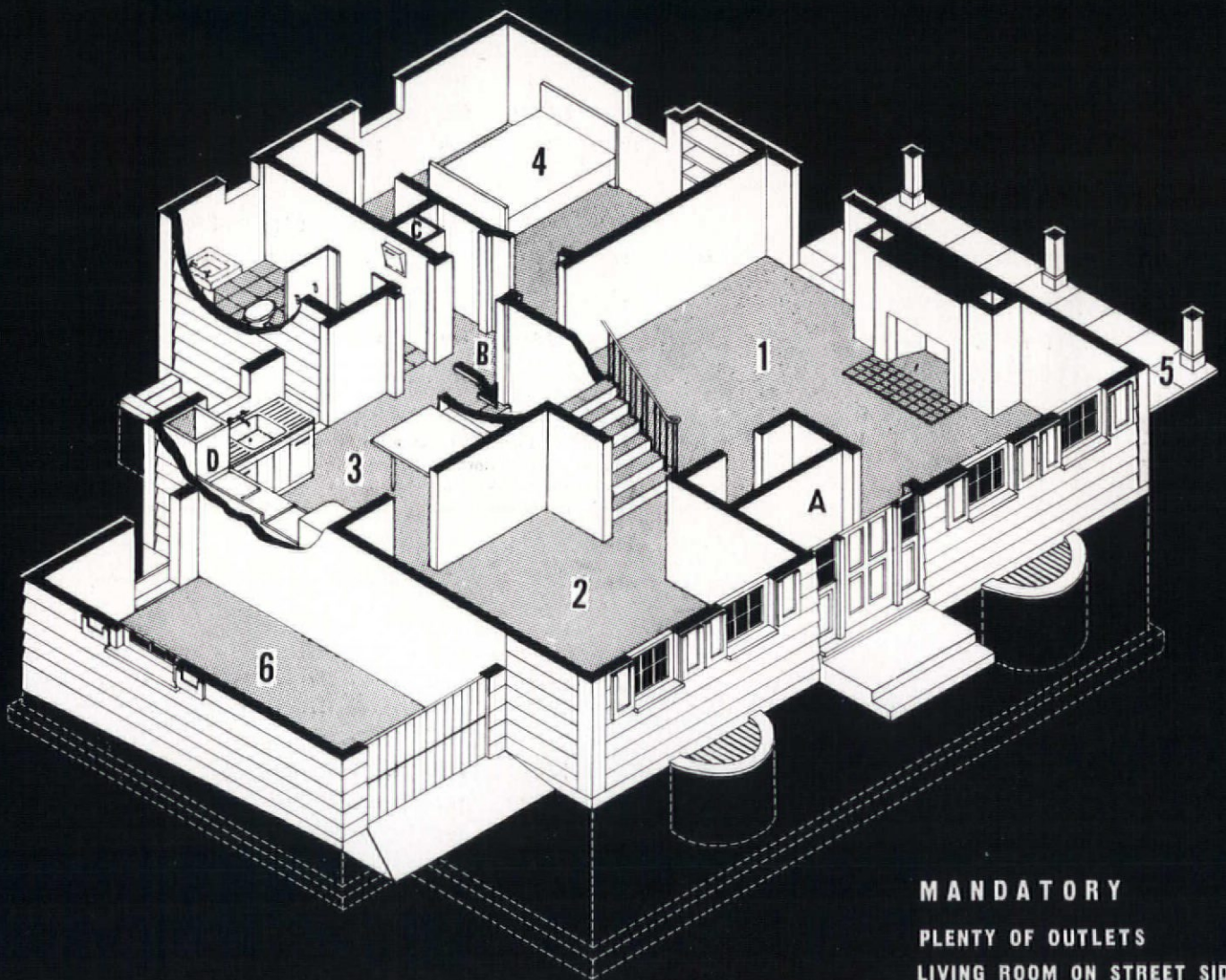


MANDATORY
BASEMENT UNDER ENTIRE HOUSE
RECREATION ROOM
BASEMENT LAUNDRY
FRUIT AND VEGETABLE STORAGE
AUTOMATIC HEATING PLANT WITH
PROVISION FOR CIRCULATION OF AIR

FIRST FLOOR. Except that it would like to have a ground floor bedroom or den, the home-buying public still wants a perfectly conventional first floor layout: separate living and dining rooms on the street side of the house; breakfast nook in the kitchen; lavatory and vestibule. On the question of the attached garage they are about evenly divided.

	PRICE CLASS									PER CENT
	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	OF TOTAL
LIVING ROOMS FACING										
STREET	529	1,598	1,712	1,009	1,832	1,467	510	149	8,806	86%
REAR OF LOT	66	198	208	145	276	303	127	47	1,370	14%
ENTRANCE INTO										
LIVING ROOM	27	161	109	61	94	85	17	9	563	5%
VESTIBULE	332	1,011	1,201	702	1,246	987	377	95	5,951	54%
HALL	282	711	808	462	903	838	320	129	4,453	41%
DINING & LIVING ROOMS										
COMBINED	100	491	429	207	354	223	63	7	1,874	17%
SEPARATE	529	1,374	1,683	1,006	1,883	1,679	646	220	9,020	83%
KITCHEN										
COMPACT	388	1,025	1,310	811	1,471	1,340	511	145	7,001	65%
LARGE	232	812	750	384	721	523	188	86	3,696	35%
BREAKFAST NOOK IN KITCHEN										
YES	510	1,339	1,624	986	1,832	1,592	586	166	8,635	82%
NO	92	463	405	193	328	259	101	57	1,898	18%
LAVATORY										
MUST HAVE	261	785	934	635	1,252	1,188	490	180	5,725	53%
WOULD LIKE	309	812	963	494	835	633	192	46	4,284	40%
NOT NEEDED	50	218	177	70	129	75	28	8	755	7%
GROUND FLOOR BEDROOM										
MUST HAVE	99	532	496	256	427	257	74	37	2,178	21%
WOULD LIKE	261	779	831	418	742	578	183	42	3,834	36%
NOT NEEDED	227	495	706	506	1,014	1,019	440	149	4,556	43%
DEN OR STUDY										
MUST HAVE	118	186	320	213	426	537	254	108	2,162	20%
WOULD LIKE	318	919	1,116	658	1,236	1,023	358	107	5,735	53%
NOT NEEDED	169	737	631	331	552	321	95	18	2,854	27%
GARAGE										
ATTACHED	324	848	1,038	642	1,226	1,013	405	137	5,633	51%
UNATTACHED	386	989	1,053	570	1,006	876	296	95	5,271	48%
NO GARAGE	15	47	28	11	13	15	5	3	137	1%
COVERED PASSAGE TO GARAGE										
MUST HAVE	37	88	99	79	134	147	66	44	694	9%
WOULD LIKE	223	416	474	245	551	454	176	57	2,596	35%
NOT NEEDED	241	795	843	460	756	649	236	60	4,040	55%

- 1. LIVING ROOM
- 2. DINING ROOM
- 3. KITCHEN
- 4. BEDROOM OR DEN
- 5. (OPTIONAL) PORCH
- 6. GARAGE
- A. VESTIBULE
- B. HALL
- C. LAUNDRY CHUTE
- D. DUMBWAITER



MANDATORY

PLENTY OF OUTLETS
 LIVING ROOM ON STREET SIDE
 SEPARATE DINING ROOM
 DINING NOOK IN KITCHEN
 GROUND FLOOR BEDROOM OR DEN
 ENTRANCE VESTIBULE
 LAVATORY
 OPTIONAL ATTACHED GARAGE
 KITCHEN CABINETS
 KITCHEN VENTILATING FAN

SECOND FLOOR.

The majority want three bedrooms on the second floor. Two of these must be double bedrooms. There must be two second floor bathrooms in addition to the first floor lavatory, which in the Five Star House [which has a shower in the lavatory on the first floor] makes three bathrooms in all.

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 - \$6,000	\$6,000 - \$7,000	\$7,000 - \$8,500	\$8,500 - \$10,000	\$10,000 - \$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
DOUBLE BEDROOMS											
ONE		201	755	847	472	830	620	185	29	3,939	39%
TWO		204	632	849	490	926	825	326	113	4,365	43%
MORE		130	235	278	187	359	395	186	95	1,865	18%
SINGLE BEDROOMS											
ONE		122	494	561	340	574	416	139	51	2,697	28%
TWO		244	727	883	513	925	852	308	77	4,529	47%
MORE		163	421	416	211	512	419	187	59	2,388	25%
BATHROOMS											
ONE		246	1,317	1,272	622	859	464	66	10	4,856	46%
2 OR MORE		338	496	788	548	1,324	1,396	637	218	5,747	54%
NO SHOWER		84	269	221	105	216	167	48	14	1,124	12%
TUB SHOWER		358	1,346	1,496	852	1,478	1,156	348	132	7,166	77%
STALL SHOWER		78	187	190	98	198	164	58	21	994	11%
SERVANTS' ROOMS											
ONE		153	141	277	221	530	862	399	101	2,684	24%
MORE		45	34	50	33	75	118	123	106	584	5%
SLEEPING PORCH											
MUST HAVE		70	146	160	80	228	194	85	44	1,007	9%
WOULD LIKE		368	1,116	1,243	700	1,287	1,075	326	94	6,209	58%
NOT NEEDED		165	588	686	431	711	617	298	93	3,589	33%

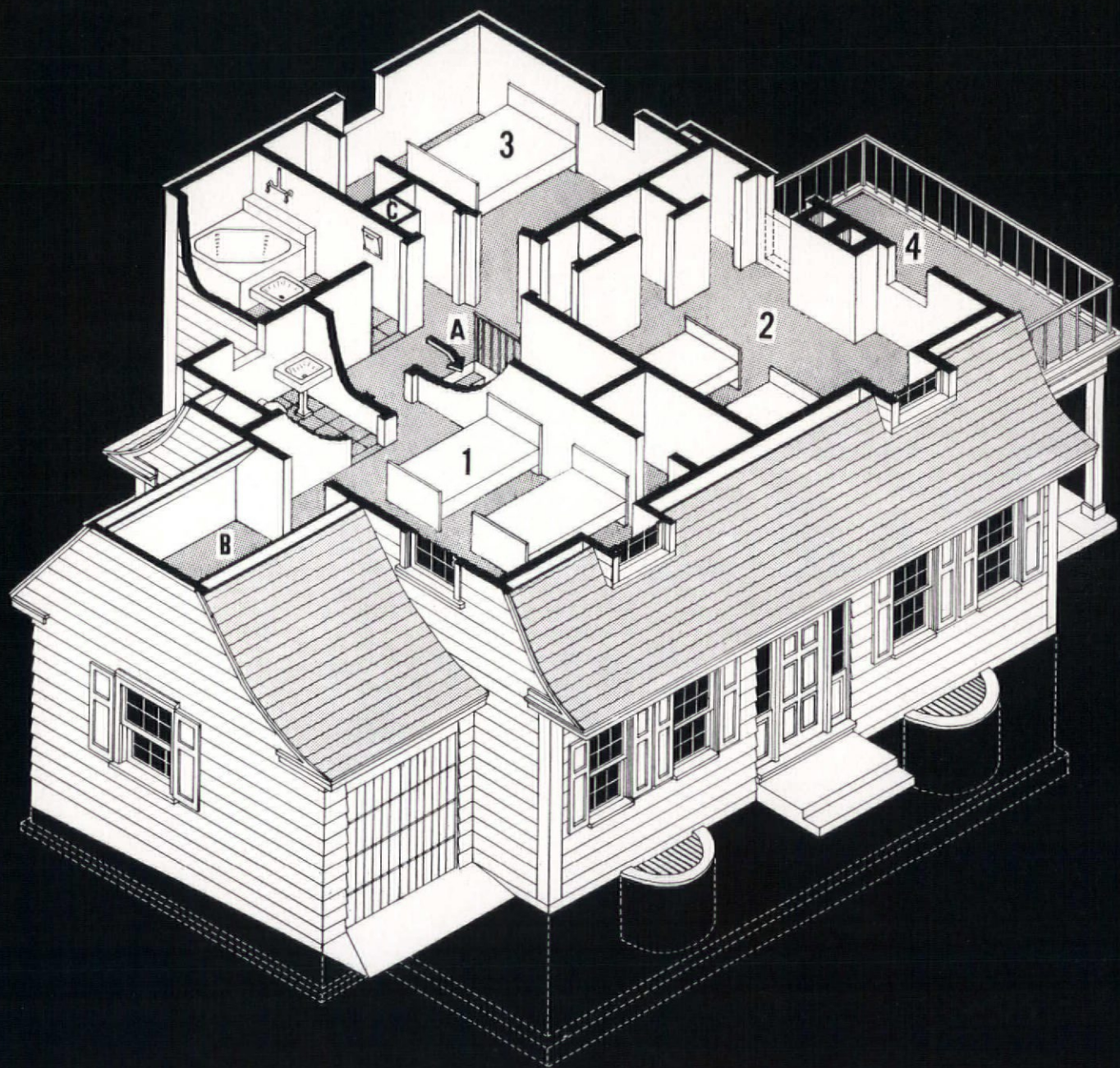
CLOSET AND STORAGE SPACE.

Since 58% of those answering the questionnaire placed "not enough closet space" first among their "pet peeves" another plan requirement is plenty of closet space. This has been interpreted to mean at least one closet per bedroom, two closets or double closet for double bedrooms, linen closet, utility closet and storage space for trunks in houses without attics.

MATERIALS









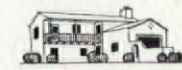

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 - \$6,000	\$6,000 - \$7,000	\$7,000 - \$8,500	\$8,500 - \$10,000	\$10,000 - \$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
WALLS											
1. BRICK		292	877	1,053	610	1,098	864	306	107	5,207	46%
2. STONE		74	209	287	180	323	237	109	48	1,557	14%
3. CLAPBOARD		52	271	307	173	281	233	92	30	1,439	13%
4. SHINGLES		61	199	281	157	249	202	78	22	1,249	11%
5. COMBINATION		32	153	156	118	189	194	62	23	927	8%
6. STUCCO		38	151	183	93	175	144	53	17	854	8%
7. CONC. BLOCKS		22	82	79	49	100	93	24	9	458	4%
ROOF											
1. ASBESTOS SHINGLE		227	820	903	468	841	592	190	44	4,085	36%
2. SLATE		106	331	372	255	470	384	136	32	2,086	19%
3. COMPOSITION SHINGLES		74	279	339	243	368	303	126	30	1,762	16%
4. TILE		66	246	291	146	294	214	89	26	1,372	12%
5. WOOD SHINGLES		37	190	252	142	236	209	84	21	1,171	10%
6. METAL		37	129	111	62	136	126	29	13	643	6%

- 1. MASTER BEDROOM
- 2. BEDROOM
- 3. BEDROOM
- 4. SLEEPING PORCH MAY BE ADDED HERE
- A. STAIR HALL
- B. STORAGE
- C. LAUNDRY CHUTE



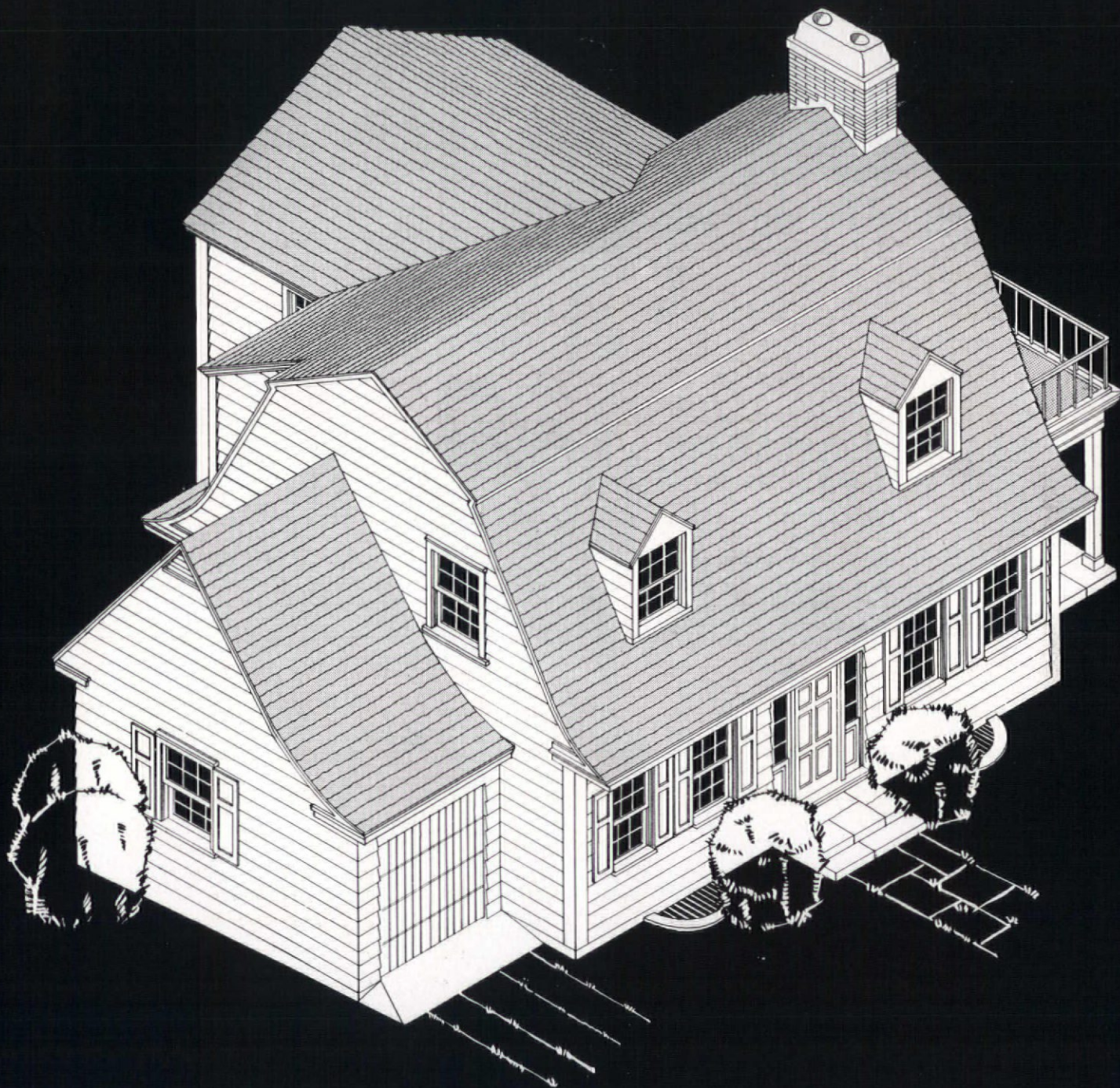
MANDATORY
PLENTY OF CLOSET SPACE
TWO DOUBLE BEDROOMS
TWO SINGLE BEDROOMS
(ONE ON GROUND FLOOR)
TWO BATHROOMS
OPTIONAL SLEEPING PORCH

STYLE. That the American taste, at least so far as architecture is concerned, still leans heavily toward the conservative, traditional styles was once again demonstrated by the answers to the Five Star Questionnaire. The overwhelming preference was for the various Colonial styles, with Dutch Colonial the most popular of these. Next came English, with 22% of the total vote; followed by Modern, which polled 11%. Practically everyone favored the two story type. Choice was on the basis of the illustrations shown at the left of the figures.

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 - \$6,000	\$6,000 - \$7,000	\$7,000 - \$8,500	\$8,500 - \$10,000	\$10,000 - \$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
 DUTCH COLONIAL	ONE STORY	19	104	90	45	73	34	7	1	373	
	TWO STORY	112	257	377	236	416	297	71	27	1,793	
		131	361	467	281	489	331	78	28	2,166	21%
 CAPE COD	ONE STORY	29	251	184	81	110	35	7	0	697	
	TWO STORY	40	250	257	136	180	121	30	5	1,019	
		69	501	441	217	290	156	37	5	1,716	17%
 GEORGIAN	ONE STORY	2	14	15	3	11	9	1	2	57	
	TWO STORY	55	86	128	106	188	191	112	33	899	
		57	100	143	109	199	200	113	35	956	10%
 SOUTHERN COLONIAL	ONE STORY	7	10	14	11	9	18	4	1	74	
	TWO STORY	52	51	82	42	102	125	79	25	558	
		59	61	96	53	111	143	83	26	632	6%
 AMERICAN FARMHOUSE	ONE STORY	1	42	16	6	9	4	1	1	80	
	TWO STORY	28	93	73	34	73	72	16	9	398	
		29	135	89	40	82	76	17	10	478	5%
TOTAL COLONIAL		345	1,158	1,236	700	1,171	906	328	104	5,948	59%
 ENGLISH	ONE STORY	18	58	65	33	58	36	13	2	283	
	TWO STORY	108	189	294	222	450	459	193	64	1,979	
		126	247	359	255	508	495	206	66	2,262	22%
 MODERN	ONE STORY	10	63	55	31	49	43	5	4	260	
	TWO STORY	45	94	145	84	186	189	72	26	841	
		55	157	200	115	235	232	77	30	1,101	11%
 SPANISH	ONE STORY	6	31	25	10	18	11	2	1	104	
	TWO STORY	16	24	41	20	65	45	20	7	238	
		22	55	66	30	83	56	22	8	342	3%
 MEDITERRANEAN	ONE STORY	4	14	13	2	15	10	3	1	62	
	TWO STORY	14	17	30	22	37	46	23	8	197	
		18	31	43	24	52	56	26	9	259	3%
 FRENCH PROVINCIAL	ONE STORY	4	8	14	5	7	6	1	0	45	
	TWO STORY	15	20	20	16	44	39	10	2	166	
		19	28	34	21	51	45	11	2	211	2%



ELEVATIONS OF FIVE STAR HOUSE SHOWN OPPOSITE



MANDATORY
DUTCH COLONIAL STYLE
BRICK WALLS*
ASBESTOS SHINGLE ROOF
SEE ALSO PLAN REQUIREMENTS

*CLAPBOARDS, WHICH WERE THIRD CHOICE, HAVE BEEN SHOWN INSTEAD BECAUSE THIS MATERIAL SEEMED MORE APPROPRIATE TO THE STYLE AND PLAN USED.

INTERIOR FINISHES

WALL FINISHES

	LIVING ROOM	DINING ROOM	BED ROOMS	BATH ROOMS	KITCHEN
PAINTED PLASTER	2,866	2,305	3,672	691	3,095
REGULAR WALLPAPER	3,562	2,930	4,273	120	303
WASHABLE WALLPAPER	1,854	1,571	1,981	415	1,202
WOOD PANELING	1,461	2,900	125	16	142
DECORATED WALL BOARD	817	638	483	99	330
GLAZED TILE COLORED	72	68	74	5,942	3,389
GLASS TILE OR SLAB	60	61	47	3,386	1,988

FLOORING

HARDWOOD WITH RUGS	10,029	9,490	9,021	221	365
SOFTWOOD CARPETED	526	541	1,044	42	63
TILE	33	33	26	7,257	621
RUBBER TILE	155	270	244	2,288	3,774
LINOLEUM	143	363	435	666	5,792
COLORED CEMENT	84	87	51	341	310

CONVENIENCES. The relative order of importance which the majority assign to various mechanical conveniences is indicated below. More than 43% placed the automatic hot water heater first.

	PRICE CLASS	Not Given	Under \$5,000	\$5,000 - \$6,000	\$6,000 - \$7,000	\$7,000 - \$8,500	\$8,500 - \$10,000	\$10,000 - \$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
FIRST	—Automatic Hot Water Heater	338	824	841	463	966	875	361	145	4,813	43%
SECOND	—Mechanical Refrigerator	201	490	647	379	720	673	262	107	3,479	31%
THIRD	—Oven Heat Controlled Stove	172	403	531	357	637	604	238	92	3,034	27%
FOURTH	—Kitchen Ventilating Fan	118	294	396	254	483	422	173	53	2,193	20%
FIFTH	—Bathroom Heater	122	340	437	251	450	356	123	34	2,113	19%
SIXTH	—Dishwasher Sink	119	329	427	254	488	397	150	53	2,217	20%
SEVENTH	—Garbage Disposal Unit	149	463	566	301	583	422	157	39	2,680	24%

KITCHEN CABINETS

ONE SIDE OF KITCHEN	351	1,088	1,076	586	1,040	715	256	56	5,168	47%
TWO SIDES	255	579	801	486	895	887	296	108	4,307	39%
THREE SIDES	86	174	213	132	282	277	142	62	1,368	13%
NO CABINETS	15	37	16	6	14	16	12	6	122	1%

KITCHEN COUNTER SURFACE

METAL	244	619	789	490	846	835	325	103	4,251	39%
LINOLEUM	134	418	451	263	479	345	132	46	2,268	21%
TILE	230	504	586	322	664	506	174	54	3,040	28%
WOOD	80	302	288	120	236	178	68	22	1,294	12%

INSULATION (WALL AND CEILING) The decided demand for insulation is noteworthy.

MUST HAVE	262	691	985	634	1,179	1,162	503	171	5,587	51%
WOULD LIKE	412	1,060	1,033	546	997	696	190	52	4,986	46%
NOT NEEDED	31	95	71	29	49	32	16	4	327	3%

ELECTRIC LIGHTING. Majority opinion indicated that the buying public is perhaps more receptive to new ideas in electric lighting than in any other phase of house design. Not only is the largest group prepared to accept living room lighting from floor and table lamps rather than ceiling fixtures—a group almost equally large wants indirect lighting. The demand for plenty of electrical outlets, as indicated by “pet peeves,” proved very strong, and most said that they “would like” outdoor lighting for garage, driveways, entries, etc.

LIVING ROOM LIGHTING

PRICE CLASS	Not Given	Under \$5,000	\$5,000 -\$6,000	\$6,000 -\$7,000	\$7,000 -\$8,500	\$8,500 -\$10,000	\$10,000 -\$15,000	Above \$15,000	TOTAL	PER CENT OF TOTAL
FLOOR AND TABLE LAMPS	132	436	508	278	479	356	149	43	2,381	48%
INDIRECT LIGHTING BUILT-IN	123	318	374	194	413	348	117	39	1,926	38%
CEILING FIXTURES	45	137	95	41	72	47	13	6	456	9%
WALL BRACKETS	17	72	43	29	42	35	11	2	251	5%

PLENTY OF OUTLETS

MUST HAVE	313	868	1,139	704	1,288	1,204	493	167	6,176	56%
WOULD LIKE	404	989	964	504	936	681	211	56	4,745	43%
NOT NEEDED	14	23	17	6	13	13	4	6	96	1%

OUTDOOR LIGHTING

MUST HAVE	219	555	678	432	804	844	373	146	4,051	37%
WOULD LIKE	440	1,126	1,223	661	1,260	926	307	66	6,009	55%
NOT NEEDED	61	194	217	114	171	124	30	17	928	8%

In the following criticism the Editors of THE FORUM comment on what appears to be the public's conception of an ideal home.

PET PEEVES

The answers represent an illuminating commentary on the weak points in the planning and equipment of the average house. “More closet space” is the universal demand. The completely mechanized house is seen in the insistence on “more outlets” as well as in the preference for various appliances. It will be noted that all of the five major complaints deal with comfort and convenience. The trend toward more and larger windows is seen in the expression of a desire for more sunlight. A strong feeling that domestic lighting arrangements must be improved also reveals itself.

POSITION ON LOT

An overwhelming majority indicate a preference for the middle of the lot. This most wasteful use of the property shows how little the potentialities of outdoor living space are realized, and indicates a general tendency to follow a widespread precedent that has little to commend it.

FULL CELLAR

While the cellar vs. no cellar controversy still goes on in professional ranks the public's preference continues strongly for the former. Although excavated space is frequently cheaper than space above ground, the use of dark basement areas for the laundry is most undesirable. Modern equipment has removed the necessity of washing “below deck.”

HEATING

The requirement of automatic heating, an expression of a desire for maximum convenience, is one that efficient control devices readily meet today. The further requirement of circulating air can be satisfied by the installation of a warm-air system, or by a hot water or steam system supplemented by a small air conditioning unit with ducts to the main rooms.

FIRST FLOOR

The living room and dining room facing front are preferred. This arrangement, which on most lots requires that the long side of the living room face the neighboring house, has serious disadvantages, which, however, are apparently considered less important than the privilege of seeing the cars go by. A multi-purpose room on the first floor is an innovation which has much to commend it: used as an emergency sick-room, or maid's room, or to afford privacy for guests, and possibly for a study convertible into sleeping quarters. The requirement of a "breakfast" nook in the kitchen has far more to commend it than the still universally popular separate dining room. The preference for a vestibule rather than a large hall saves space.

SECOND FLOOR

Three bedrooms and two baths are standard for the family of moderate income with two adults and two children. With the additional multi-purpose room on the first floor, the house contains ample accommodation for family and guests.

STYLE

Colonial is by far the most popular style, with Dutch Colonial preferred among its various types. A majority wanted brick exterior walls and asbestos shingle roof. The popularity of Colonial is a reasonable one: it permits the maximum use of stock materials and the results are likely to be more attractive than the excesses commonly committed in the name of "Modern," "English" or "Spanish."

INTERIOR MATERIALS

The overwhelming preference shown for traditional, time-tried materials is most strongly indicated here. With the exception of linoleum in the kitchen and rubber tile in the bathrooms, few synthetic materials received much consideration. For kitchen work surfaces the use of metal shows strong demand. With the above exceptions, either the new materials are not yet sufficiently well known, or they are too costly, or the buying public does not consider them superior to the traditional materials.

CONVENIENCES

As might have been expected, continuous hot water is the most urgently demanded convenience. Mechanical refrigeration is also a "must" in the majority of cases. Thermostatically controlled stoves, kitchen ventilators and bathroom heaters are favored over dishwashers and garbage disposal units. The demand for mechanical conveniences is universal and must strongly influence future trends in house design.

ELECTRIC LIGHTING

The answers show a surprising breaking away from traditional lighting methods. For the living room, floor and table lamps are preferred, with indirect and built-in fixtures required in a large percentage of the cases. This may be attributed to recent educational campaigns plus a growing impatience with the usually inadequate methods of illumination.

UNDER \$5,000

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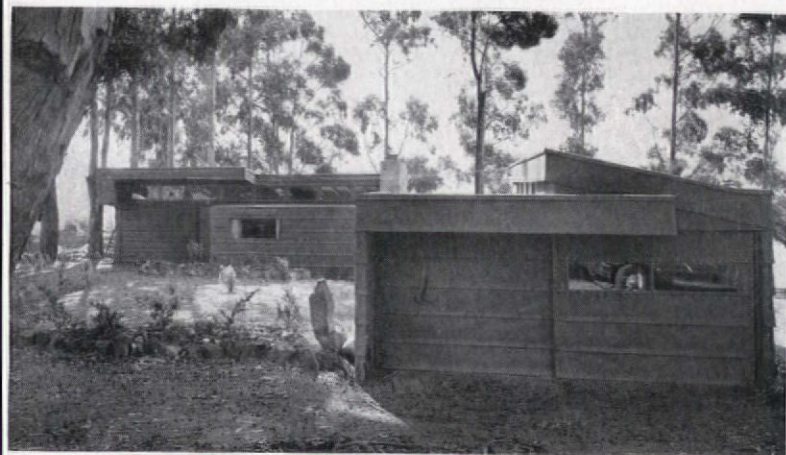
\$5,000 TO \$10,000

19.	PORT WASHINGTON, N. Y.	THEODORE WHITEHEAD DAVIS	442
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49.	KENT, CONN.	WILLIS N. MILLS	476
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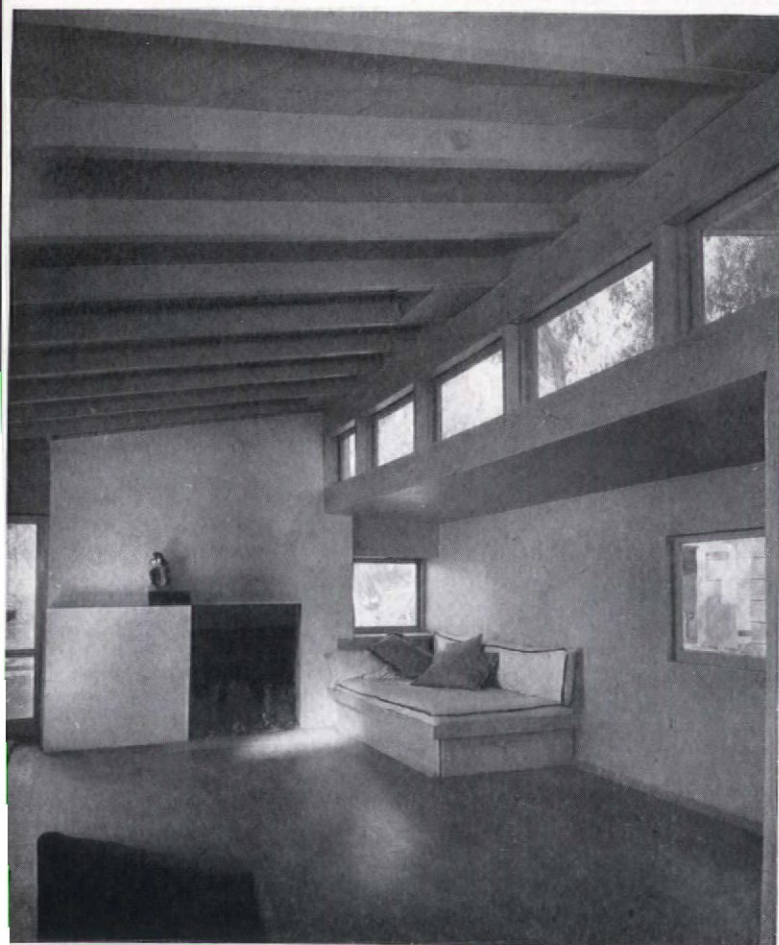
I. HOUSE FOR DR. SASHA KAUN, SAN FRANCISCO BAY



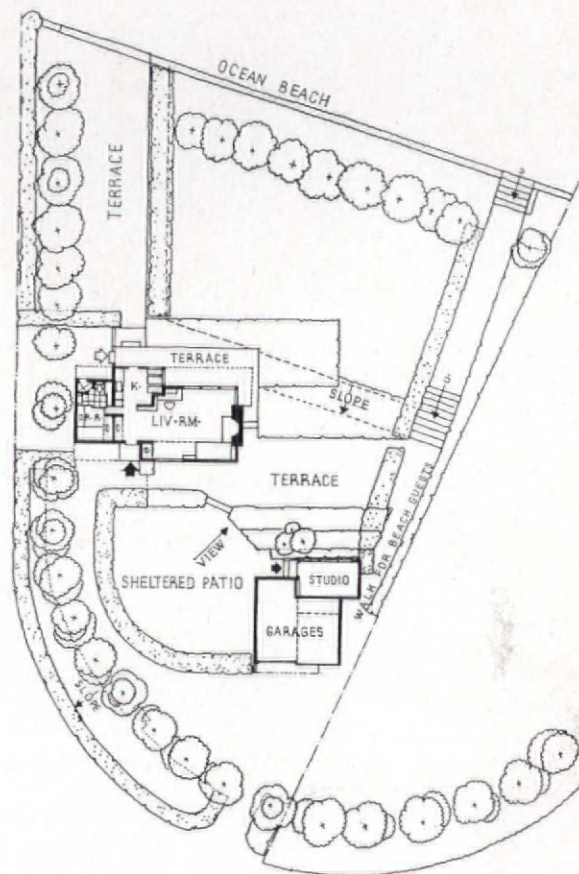
A rambling plan, ideally suited for a combination of outdoor and indoor activities in a year-round temperate climate. The large sliding glass doors allow for extreme elasticity and inter-relationship between the various elements, thus porches and terraces become ideally integrated with the more enclosed rooms. Through an efficient combination of built-in furniture and cabinets the plan has been rid of numerous partitions, and the relative importance of the living room defines this element as the central core of the residence. Sleeping, dining, and food preparation are considered subservient functions and the minimum necessary cubage is allowed them. The profusion of window area and the large overhang of the roof afford ample protection from inclement weather, while allowing for adequate ventilation. Externally this house follows no stylistic precedent, it is the expression of a thoughtfully designed plan. Cost: \$3,000. Cubage: 7,700 at 40 cents.



GARAGE AND ENTRANCE



LIVING ROOM



FLOOR AND PLOT PLAN

SCALE IN FEET
0 5 15 25 35 45

CONSTRUCTION OUTLINE

STRUCTURE

Wood frame, sheathing, outside finish, slate covered roofing felt fastened with horizontal wood strips.

ROOF

Same roofing felt as on outside walls.

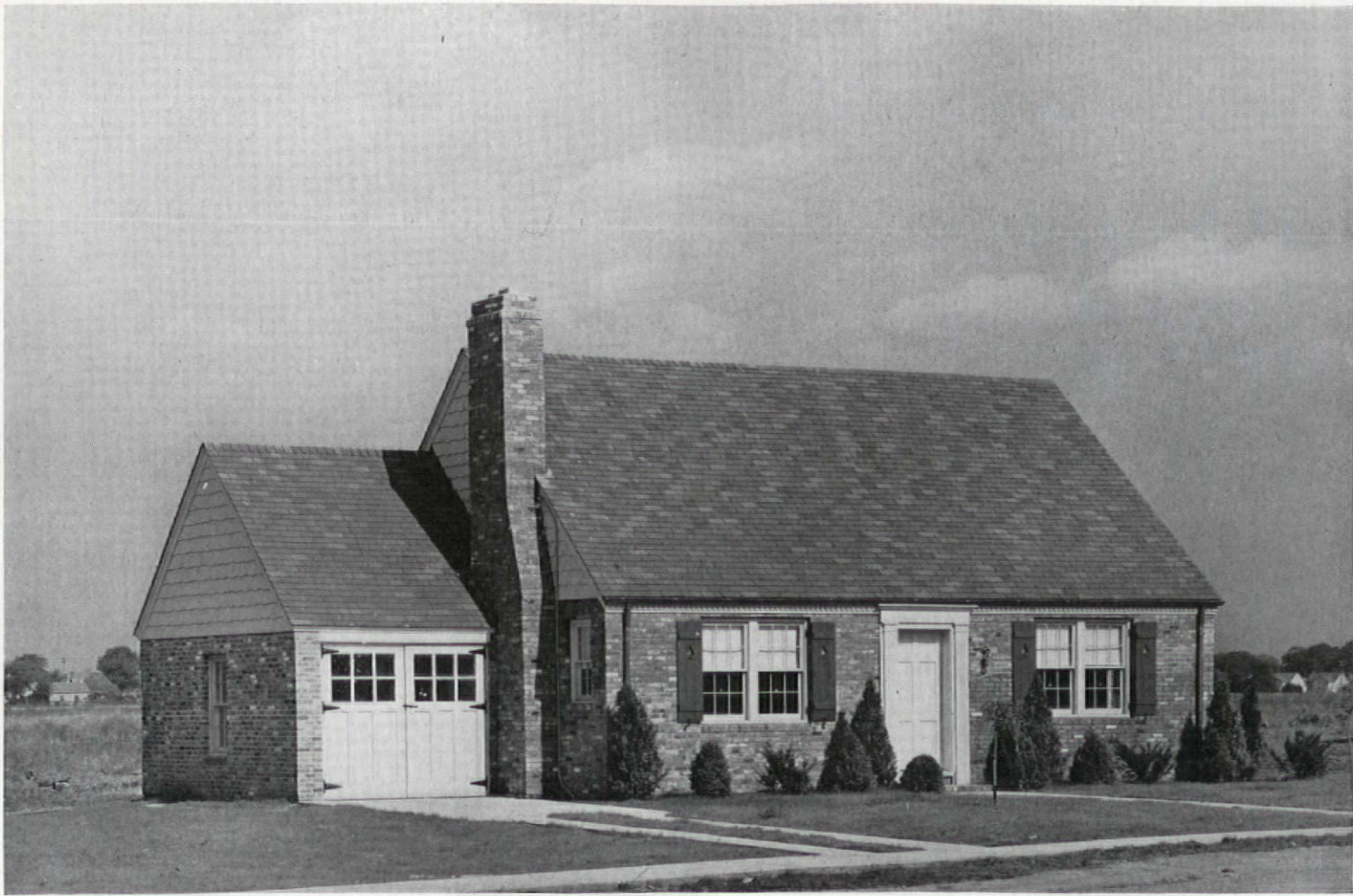
WINDOWS

Sash—wood, special design. Wood sliding doors in living room.

WALL COVERINGS

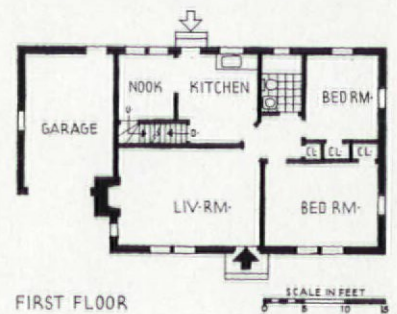
All inside walls covered with plywood which is stained yellow.

2. HOUSE IN EAST HEMPSTEAD, LONG ISLAND, N. Y.



Murray M. Peters

JOHN E. CAHILL, ARCHITECT

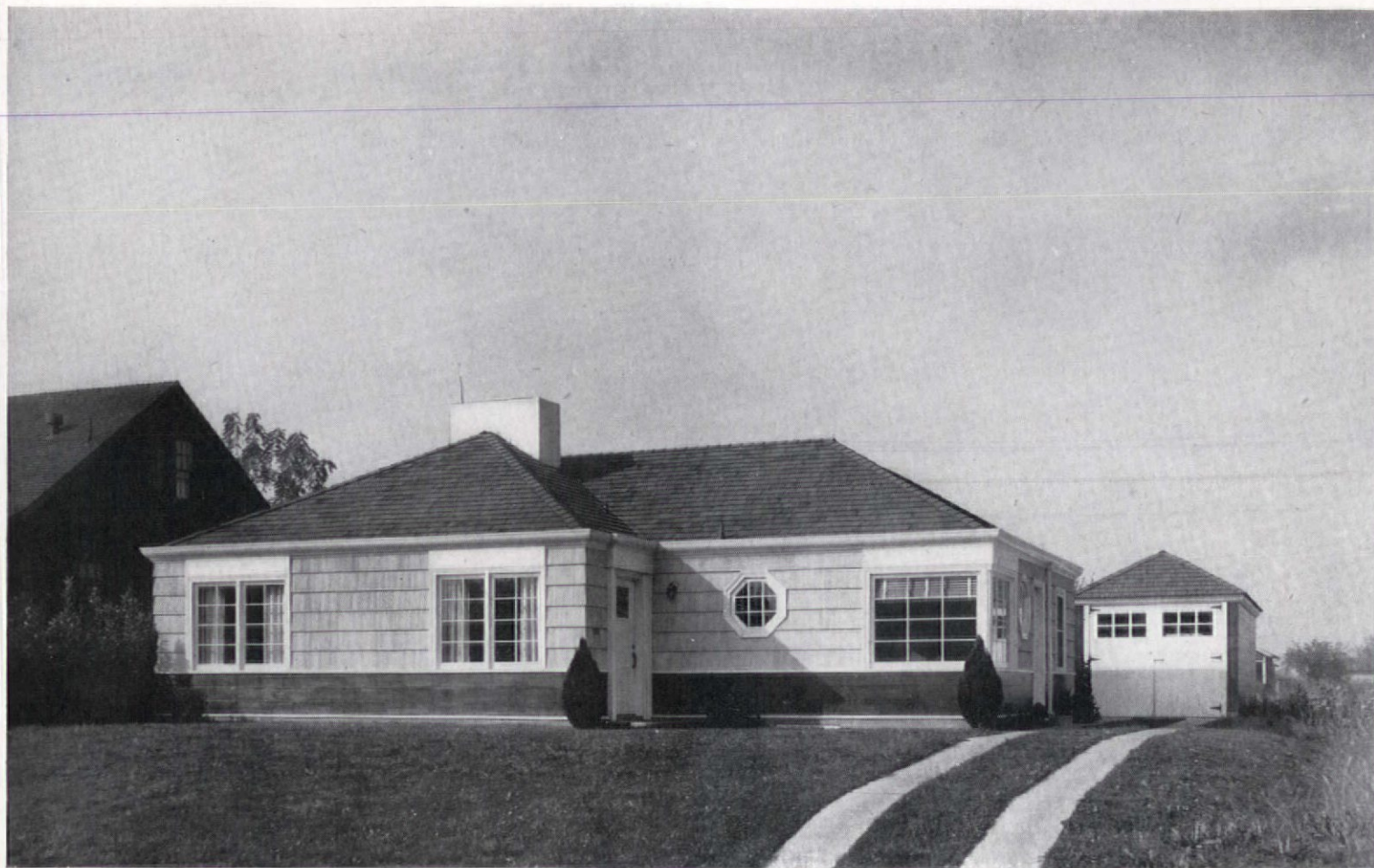


This is one of several residences, all having similar plans, but each treated differently externally in order to relieve repetition. In this particular example the Cape Cod cottage has been adapted to include the contemporary garage requirement. The cubage has been reduced to a minimum through the absence of entrance hall and dining room. The nook adjoining the kitchen should prove adequate when used for dining space, and the separate service entrance minimizes the functional importance of the front door. The corner circulation arrangement between the main rooms is a perfect illustration of space saving in the almost complete elimination of hall space. Cost: \$3,450. Cubage: 21,000 at 16½ cents.

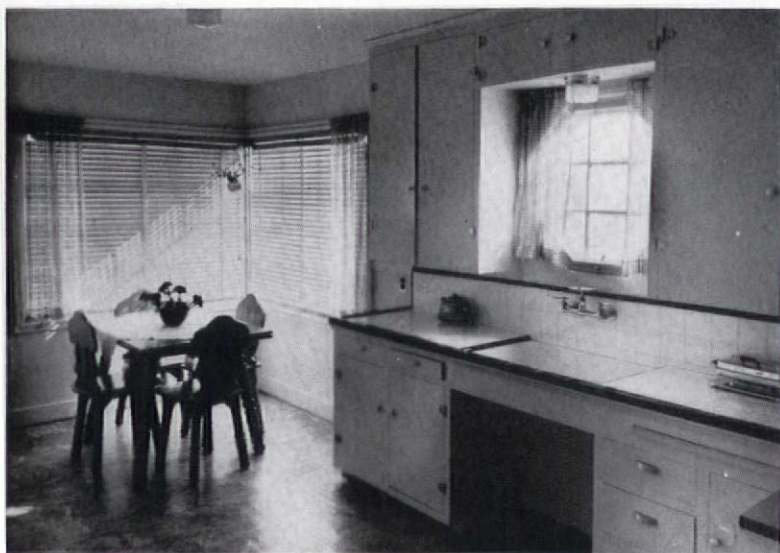
CONSTRUCTION OUTLINE

STRUCTURE: Wood frame, sheathing and 4 in. brick veneer. Inside—rock lath and plaster.
ROOF: U. S. Gypsum asphalt shingles.
SHEET METAL WORK: 16 oz. copper.
WINDOWS: Wood, double hung, weatherstripped. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co.
FLOORS: Living room, bedrooms and halls— $\frac{7}{8}$ x $2\frac{1}{4}$ in. oak. Kitchen—Sealex linoleum on $\frac{7}{8}$ x $2\frac{1}{2}$ in. pine.
PAINTING: Interior: Walls—papered. Ceilings—Sunflex cold water paint. Floors—2 coats shellac.
ELECTRICAL INSTALLATION: Wiring system—General Electric Co.
KITCHEN EQUIPMENT: Refrigerator—General Electric.
PLUMBING: All fixtures by Kohler Co. Soil pipes—cast iron. Water supply pipes—copper.
HEATING: One pipe, steam. Boiler—Burnham Boiler Corp.

3. HOUSE FOR HART LARSEN, EUGENE, ORE., PETER R. DAMSKOV, ARCHITECT



A novel and original conception of the one-story type of residence. The general lines and details are classical in style, but the treatment of general forms is handled in a refreshing and interesting manner. The plan is well balanced, and the kitchen is so well equipped and designed that the adjacent, amply lighted, dining space does not suffer from the proximity. Closet space is plentiful and the general circulation is economically worked out. Cost: \$4,400. Cubage: 21,714 at 20 $\frac{1}{4}$ cents.



KITCHEN

CONSTRUCTION OUTLINE

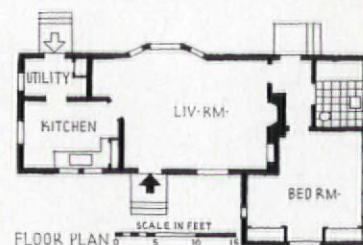
STRUCTURE: Cedar shingles, building paper, $\frac{3}{4}$ in. fir shiplap sheathing, 2 x 4 in. studs, lath and plaster.
ROOF: Royal red cedar shingles.
SHEET METAL WORK: Flashing and gutters—No. 40 Armco roofing tin, American Rolling Mills.
WINDOWS: Sash—Douglas fir casement. Glass—single strength, quality A.
FLOORS: Living room, bedrooms and halls—red oak. Kitchen—linoleum on fir sub-floor. Bathrooms—U. S. quarry tile.
WOODWORK: Trim and doors—Douglas fir.
ELECTRICAL INSTALLATION: Knob and tube.
KITCHEN EQUIPMENT: Electric, Kelvinator.
PLUMBING: All fixtures by Washington Eljer. Soil pipes—cast iron. Water supply pipes—galvanized iron.
HEATING: Warm air, Western Furnace Co., Kelvinator oil burner.

4. HOUSE FOR JOHN CARTER BIGGERS, WHITTIER, CALIF.



Mott

HUGHES BROTHERS, ARCHITECTS



CONSTRUCTION OUTLINE

STRUCTURE: All framing lumber No. 1 common Oregon pine, redwood siding. Interior—hardwall plaster over $\frac{3}{8}$ in. No. 1 Oregon pine lath.

SHEET METAL WORK: Flashing, gutters and leaders—28 gauge galvanized iron.

WINDOWS: Sash—double hung and casement, California white pine, redwood sills. Frame—vertical grain Douglas fir.

FLOORS: Living room and bedrooms—oak. Kitchen—linoleum covered. Bathrooms—tile.

WOODWORK: Trim and cabinets—Oregon pine. Doors—white pine.

PAINTING: Interior—2 coats flat paint, 1 coat enamel. Exterior—3 coats lead and oil.

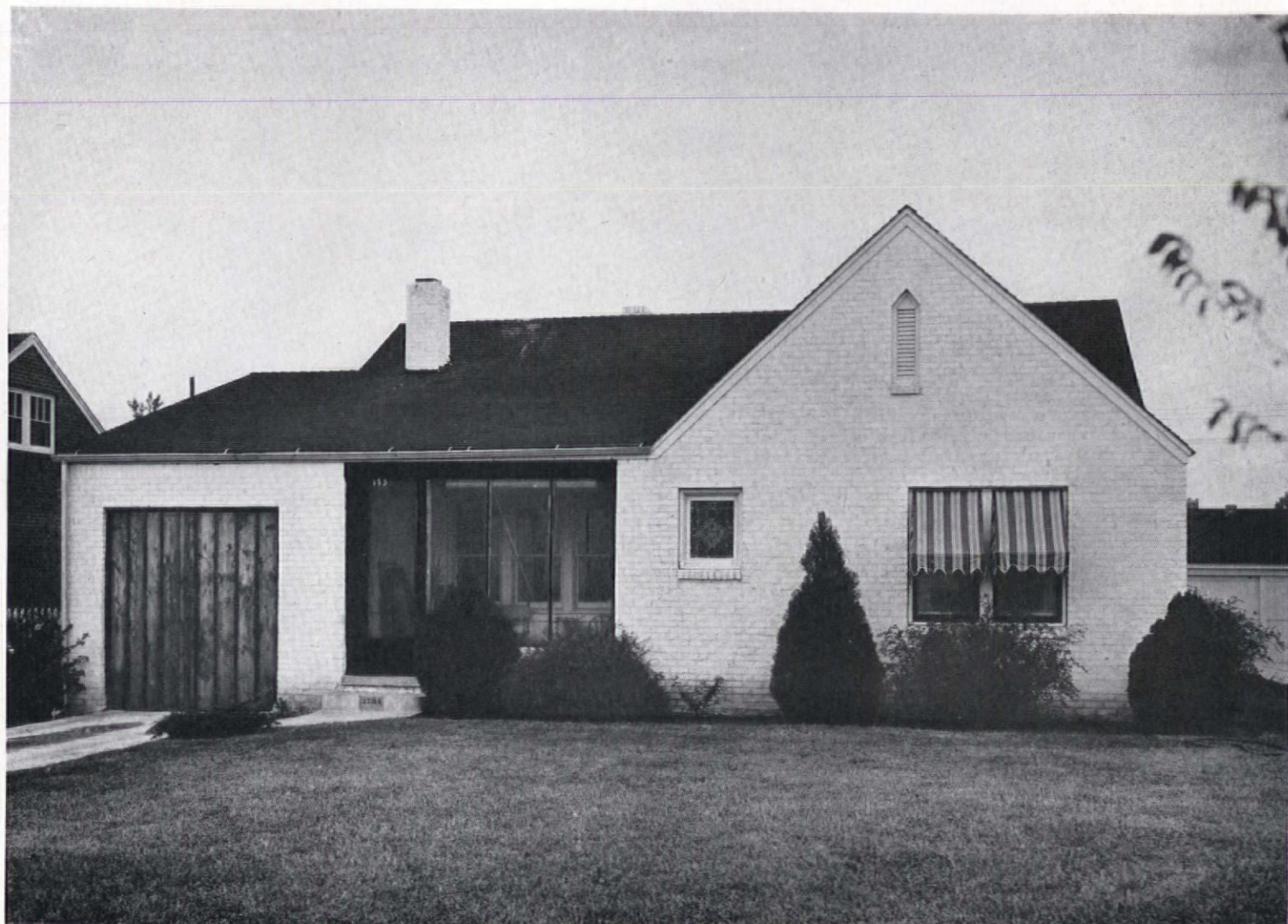
ELECTRICAL INSTALLATION: Wiring system—knob and tube. Switches—toggle.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. All pipes—galvanized iron.

HEATING: Warm air, electric heater in bath. Boiler—gas fired.

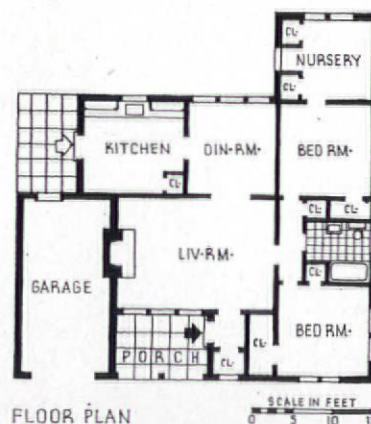
While its disposition of all the rooms on one floor is in keeping with the present-day trend in California small houses, the emphasis on Colonial precedent, as indicated by the doorway, is something of a departure. Chief element in the plan is the living room, which serves as dining room and circulation to bedroom as well. Its irregular shape provides a dining alcove, and its placing allows cross ventilation. Cross ventilation, it will be noted, is obtained in all rooms, and the bedroom has windows on three exposures. In the latter room the placing of two beds might prove something of a problem. Two entrances are provided on the rear, one to the garden and one for service. Cost: \$3,000.

5. HOUSE FOR LEON EUGENE SCHROEDER, SR., TULSA, OKLAHOMA



Miller

LEON EUGENE SCHROEDER, SR., DESIGNER



FLOOR PLAN

CONSTRUCTION OUTLINE

STRUCTURE: 4 in. brick veneer, 1 in. air space, tar felt over 1 x 10 in. sheathing on studs. Plastered inside on wood lath.

ROOF: Perfection edge grain shingles.

SHEET METAL WORK: Galvanized iron.

WINDOWS: Sash—1½ in. white pine. Glass—double strength, quality A.

FLOORS: Living room, bedrooms and halls—oak. Kitchen and bathrooms—linoleum.

WOODWORK: Trim and doors—white pine.

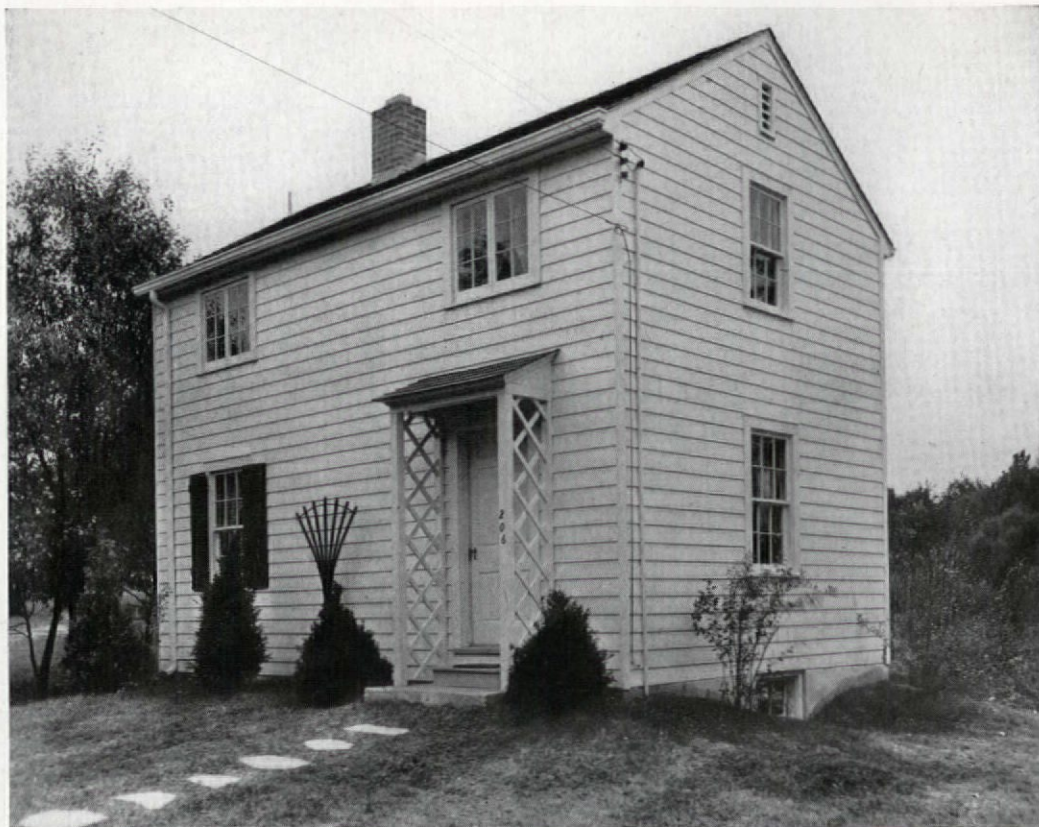
ELECTRICAL INSTALLATION: Wiring system—rigid conduit. Switches—toggle.

PLUMBING: Soil and vent pipes—heavy duty cast iron. Water supply pipes—galvanized iron.

HEATING: Floor furnace, 45,000 BTU capacity.

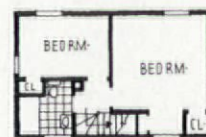
This residence is noteworthy for the compactness of its plan. The living room seems small, inadequately ventilated, and lacking in exterior exposure; however, since it is located in the near tropical zone, the protection offered from direct heat penetration is desirable. The entrance hall has been cleverly incorporated with the porch and coat closet. The exterior is commendable for the integration of the garage in the general design, and the whitewashed expanse of brick wall is pleasantly broken up by brilliantly colored awnings, necessary protection against the sun rays. Exclusive of garage, cost: \$3,980. Cubage: 16,570 at 24 cents.

6. HOUSE FOR CHARLES SHREVE, BETHESDA, MARYLAND



Buckingham Photos

NATIONAL LUMBER
MANUFACTURERS ASSN.
ELDRD MOWERY, DESIGNER



SECOND FLOOR.



FIRST FLOOR.

An extremely inexpensive house whose plan is commendable for the elimination of all unnecessary wall partitions, and for the logical orientation of each main element. The stairway is particularly well placed, since it provides not only an entrance foyer and a coat closet, but it also increases the intimacy of the living room with the garden. The window area seems slightly inadequate for a house located in a Southern State. The completed landscaping will relieve the general feeling of verticality, thus eliminating the box-like appearance. Cost: \$3,114. Cubage: 9,600 at 32½ cents.



BEDROOM

CONSTRUCTION OUTLINE

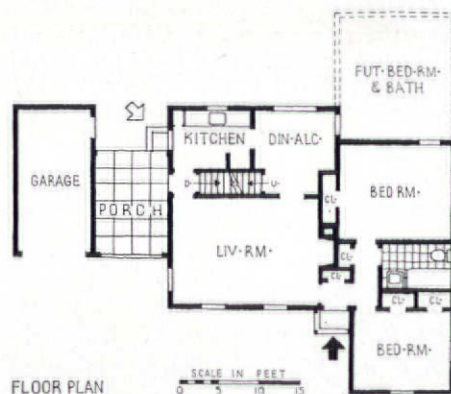
FOUNDATION: 8 in. cinder blocks.
STRUCTURE: Standard wood frame, 8 in. siding, inside wood lath and plaster.
ROOF: Covered with wood shingles.
SHEET METAL WORK: Galvanized iron.
WINDOWS: Wood, double hung, Curtis stock. Glass—single strength.
FLOORS: Oak, except kitchen which has maple and bathroom which has linoleum over pine.
WALL COVERINGS: Living room—wall paper. Bedrooms—Douglas fir plywood.
PAINTING: Exterior walls—3 coats lead and oil.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle.
KITCHEN EQUIPMENT: Stove—gas, Estate Stove Co. Refrigerator—electric. Sink—flat rim.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply pipe—galvanized iron.
HEATING: Gravity, hot air, coal fired boiler.

7. HOUSE FOR SANFORD WARD, MASSAPEQUA, L. I., NEW YORK



Gustav Anderson Photos

RANDOLPH EVANS,
ARCHITECT



CONSTRUCTION OUTLINE

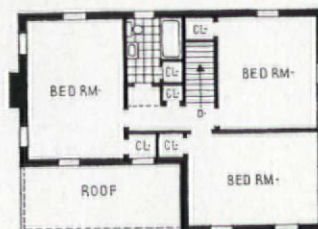
STRUCTURE: 18 in. red cedar siding over paper, sheathing, studs, wood lath, plaster.
ROOF: Red cedar shingles on 1 x 2 in. purlins.
SHEET METAL WORK: 16 oz. copper.
INSULATION: Outside walls—2 in. rock wool. Attic floor—4 in. rock wool.
WINDOWS: Pine, double hung. Glass—quality B. Screens—aluminum alloy in wood frame.
FLOORS: Living room, bedrooms and halls—¾ in. oak. Kitchen—linoleum, Armstrong Cork Products Co. Bathrooms—ceramic tile.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—tumbler.
KITCHEN EQUIPMENT: Stove—Detroit Jewel, Detroit Vapor Stove Co. Refrigerator—Frigidaire.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—cast iron. Water pipe—copper.
HEATING: Steam. Boiler—Richardson & Boynton, coal fired, with Taco hot water heater.

This rambling small house is admirable in its compactness and pleasantly simple exterior treatment. A future wing may be added to the structure without spoiling the existing continuity of plan and elevation. Interior accessibility to garage, basement, and services is extremely well handled. The ample closet space allowance and the ideal location of the bathroom make this residence mechanically efficient, and the landscaping frames and enhances the architectural design. Cost: \$4,375. Cubage: 17,800 at 24½ cents.

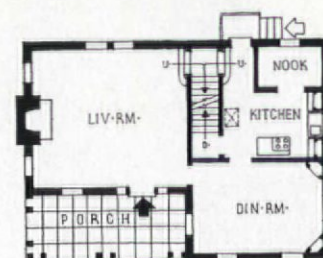
8. HOUSE IN LOUISVILLE, KENTUCKY, J. HEYWARD EARTHART, DESIGNER



Fischer



SECOND FLOOR



FIRST FLOOR

SCALE IN FEET
0 5 10 15

This is an imaginative example of the small house plan. The direct entrance into the living room is not objectionable since the covered porch offers ample transition. The stair case giving privacy and control to the second floor, and the inclusion of a small dining alcove overlooking the garden are worthy of note. The exterior is effectively handled in a simple manner. Cost: \$4,955. Cubage: 23,450 at 21¼ cents.



KITCHEN-DINETTE

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—4 in. brick veneer, 1 in. air space, Sisalkraft paper, 2 x 4 in. studs. Inside—rock lath and plaster.

ROOF: Wooden rafters, composition shingles on sheathing, Phillip Carey Co.

SHEET METAL WORK: Galvanized iron.

INSULATION: Outside walls—rock lath, U. S. Gypsum Co. Attic floor—Celotex. Weatherstripping—copper.

WINDOWS: Sash—wood, double hung, metal casement in basement. Glass—double strength, quality A, Pittsburgh Plate Glass Co.

FLOORS: Living room, bedrooms and halls—oak. Kitchen—linoleum. Bathrooms—tile.

WALL COVERINGS: Bedrooms and halls—wallpaper. Bathroom—tile wainscot.

PAINTING: Floors—filled, stained and shellacked. Trim, doors and sash—3 coats enamel, E. I. Du Pont.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—Bryant Electric Co. Fixtures—direct, Chase Brass & Copper Co.

PLUMBING: All fixtures by Crane Co. Pipes—galvanized iron throughout.

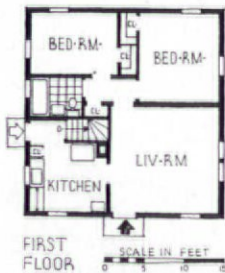
HEATING: Hot air, Monarch furnace.

9. HOUSE FOR J. T. HARDING, BETHESDA, MARYLAND



Buckingham

NATIONAL LUMBER
MANUFACTURERS ASSOCIATION
ELDRED MOWERY, DESIGNER

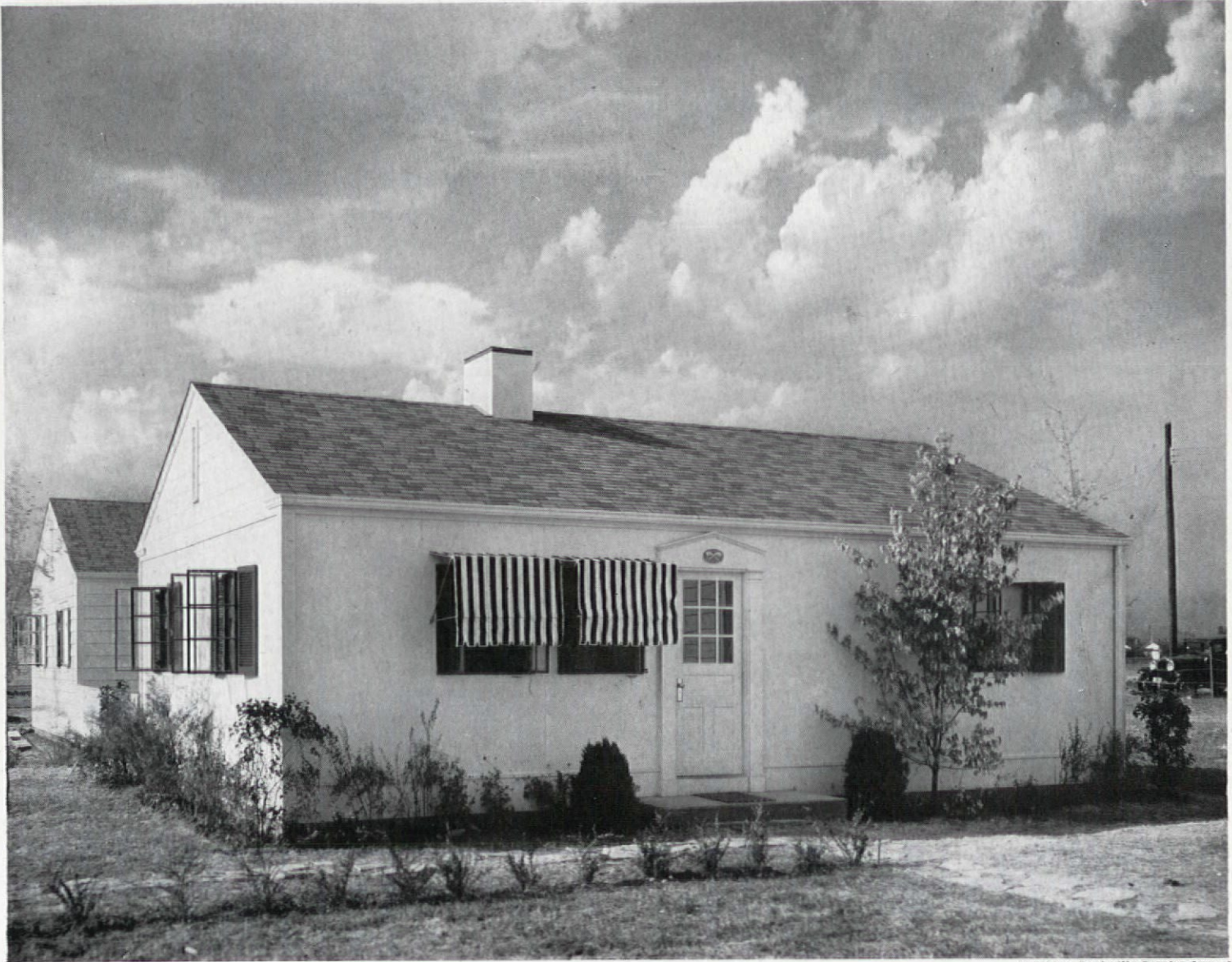


CONSTRUCTION OUTLINE

FOUNDATION: 8 in. cinder blocks.
STRUCTURE: Standard wood frame, 8 in. siding, inside wood lath and plaster.
ROOF: Covered with wood shingles.
SHEET METAL WORK: Galvanized iron.
WINDOWS: Wood, double hung, Curtis stock. Glass—single strength.
FLOORS: All rooms—maple, except bath which has linoleum over pine.
WALL COVERINGS: All rooms—wallpaper, except painted walls in kitchen and bath.
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle.
KITCHEN EQUIPMENT: Stove—gas. Refrigerator—electric. Sink—rolled rim.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply pipes—galvanized iron.
HEATING: Gravity, hot air, coal fired boiler. Hot water heater—Pittsburgh automatic storage.

A minimum house in its shape, exterior treatment, and size of accommodations, this dwelling demonstrates the essential soundness of simplicity in small house design. Its only “architectural” feature is the shelter over the main entrance, an addition amply justified by its usefulness and by its accentuation of the doorway. The only element which detracts from its appearance is the scrubby, unimaginative planting so frequently used with houses of this type. Builders who spend money on landscaping would do well to study the manner in which early American wood houses were related to their surroundings. The plan is exceedingly compact and well laid out. Privacy is obtained for the bedrooms, and the one bath can be conveniently used as a lavatory for guests. Cost \$3,094.

10. HOUSE IN LOUISVILLE, KENTUCKY GUNNISON MAGICHOMES, INC.

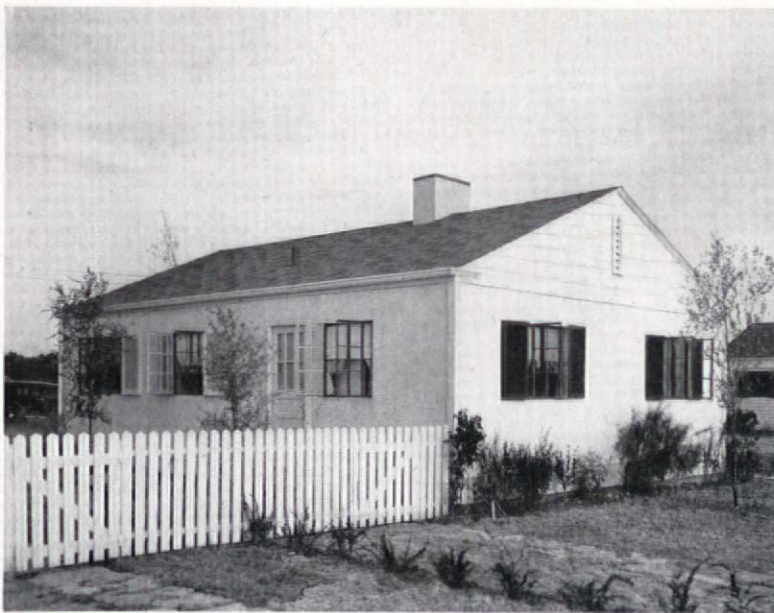


Courtesy, Louisville Courier-Journal

The Gunnison MagicHome is different from other prefabricated houses not only in construction, but also in the exterior treatment. Large and standardized wall units of built-up and insulated veneered wood panels allow for rapid construction. While the simplicity of the typical plan reduces complicated building to a minimum it nevertheless provides ample closet space and a logical sequence of rooms. The absence of entrance hall and separate dining room may be questioned, but these units are not indispensable in the small house located in a comparatively warm climate where the transition from the interior to the out of door may be sudden without discomfort. The exterior treatment is left to local architects, thereby allowing for the introduction, in these prefabricated units, of personal and in this particular case tasteful handling, thus relieving the sameness otherwise unavoidable in large groups of such residences. Cost: \$2,650. Cubage: 10,900 at 24 $\frac{1}{4}$ cents.



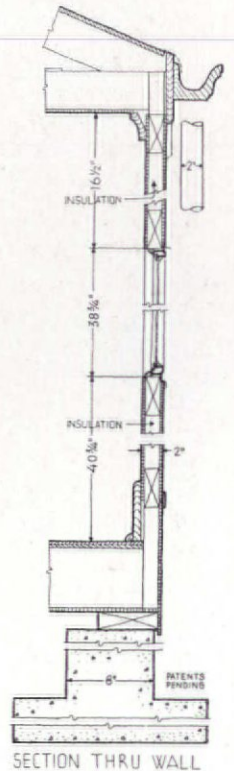
THE DEVELOPMENT



REAR ELEVATION



LIVING ROOM



CONSTRUCTION OUTLINE

FOUNDATION

Walls—concrete

STRUCTURE

Exterior walls—two plywood panels bonded to wood stiffeners, insulation between. Exterior finish—paneled plywood, clapboard or shingle. Interior partitions—same as outside. Interior finish—stained and waxed walnut, mahogany or gum veneer. Floor construction—oak finished plywood bonded to wood joists with insulation between. Ceiling—maple finished plywood bonded to wood joists, insulation between.

ROOF

Composition shingles over plywood panels bonded to wood rafters.

CHIMNEY

Painted metal, contains only flue from heater.

SHEET METAL WORK

Flashing and leaders—copper. Gutters—fir.

INSULATION

Outside walls, ground and attic floor—2 in. of rock wool.

WINDOWS

Steel casements, stock sizes. Glass—single strength, quality A.

FLOORS

Oak plywood, 5/8 in. thick.

WALL COVERINGS

Living room—walnut plywood. Bedrooms—mahogany and gum plywood. Kitchen and bathrooms—painted.

PAINTING

Interior walls, ceilings and floors—stained and waxed. Exterior walls—painted, one shop coat—aluminum, 2 job coats—lead and oil.

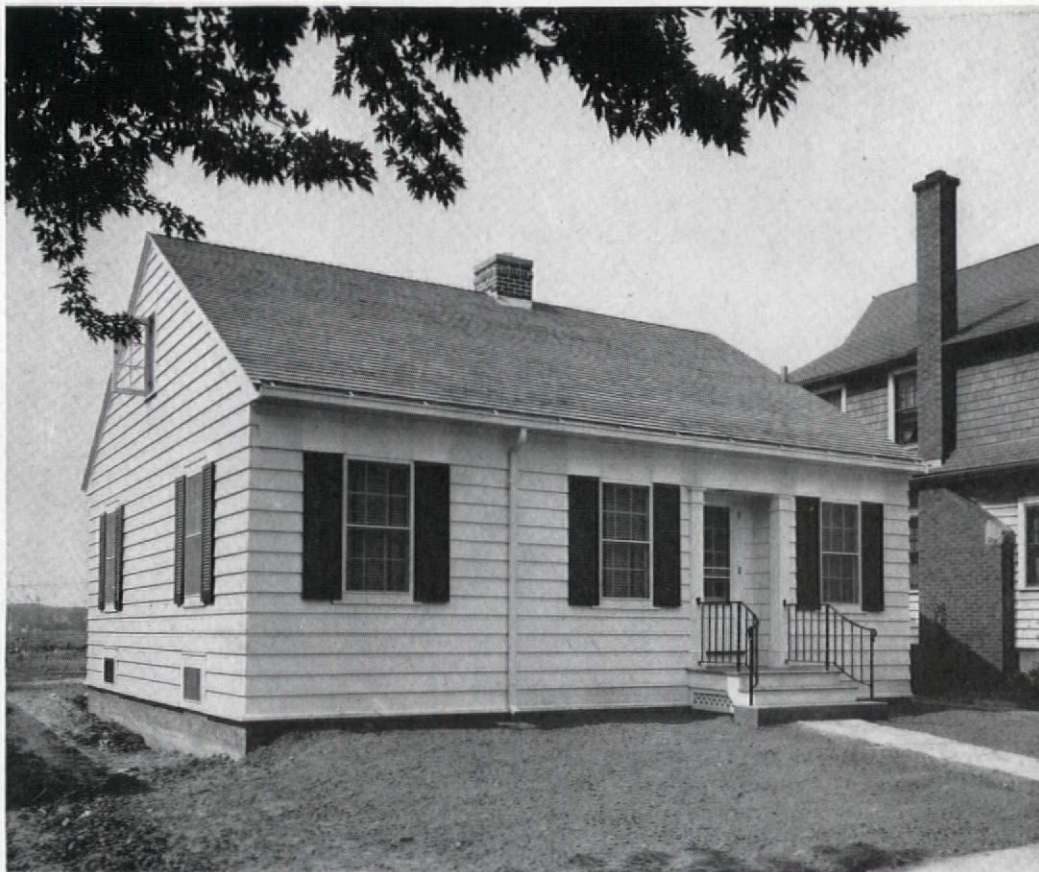
ELECTRICAL INSTALLATION

Wiring system—BX. Switches—toggle.

HEATING

Circulated warm air. Gas fired boiler.

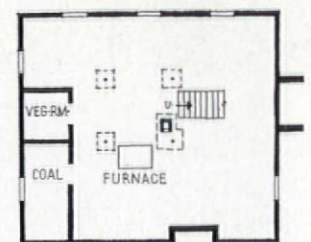
II. HOUSE FOR HOWARD ERICKSON, MADISON, WISCONSIN



JOHN J. FLAD
ARCHITECT



FIRST FLOOR



BASEMENT

SCALE IN FEET
0 5 10 15

An extremely efficient solution of the space saving square plan, which practically eliminates all waste hall space. Rarely does a house so limited in cubage include: entrance hall, two bedrooms, and such ample closet space. The exterior is pleasantly proportioned, and well climaxed by a carefully designed entrance motif. Cost: \$3,775. Cubage: 17,760 at 22 cents.



KITCHEN-DINETTE

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—siding, sheathing, water-proof paper, 4 x 4 in. studs, 16 in. o. c., balsam wool, gypsum plaster on wood lath.
ROOF: 2 x 6 in. rafter, 16 in. o. c., wood shingles.
SHEET METAL WORK: Flashing, gutters and leaders—galvanized iron.
WINDOWS: Sash—Anderson stock, storm sash. Glass—quality A, single strength, Libbey-Owens-Ford Glass Co.
FLOORS: All rooms—2¼ in. red oak. Kitchen—linoleum. Bathrooms—vitreous tile.
ELECTRICAL INSTALLATION: Wiring system—flexible conduit. Switches—General Electric Co.
PLUMBING: Kitchen sink, laundry trays and bathroom fixtures—Kohler Co. Soil and vent pipes—cast iron. Water supply pipe—galvanized iron.
HEATING: Warm air.

12. HOUSE IN ALEXANDRIA, VA. A. K. WATERVAL, DESIGNER



Stewart Bros. Photos

A one-story residence planned for a second floor addition to contain three bedrooms, a bath and a roof terrace. At present the dining room is partitioned off for use as a bedroom and a portion of the kitchen has been closed off to accommodate a temporary bathroom. The cost of the house is given as \$3,618, at 18.8 cents per cubic foot. This phenomenally low price is partially explained by the fact that the architect acted as general contractor, and neither architect's fee nor contractor's profit is included. Union and unskilled labor was used at prevailing local prices.



CONSTRUCTION OUTLINE

STRUCTURE: 8 in. cinder block, 1 in. stucco. Inside—furring strips, ½ in. Nu-Wood, Wood Conversion Co.
ROOF: Built up composition.

SHEET METAL WORK: Flashing—copper. Gutters and leaders—galvanized iron.

INSULATION: Outside walls—Nu-wood. Roof—balsam wool, Wood Conversion Co.

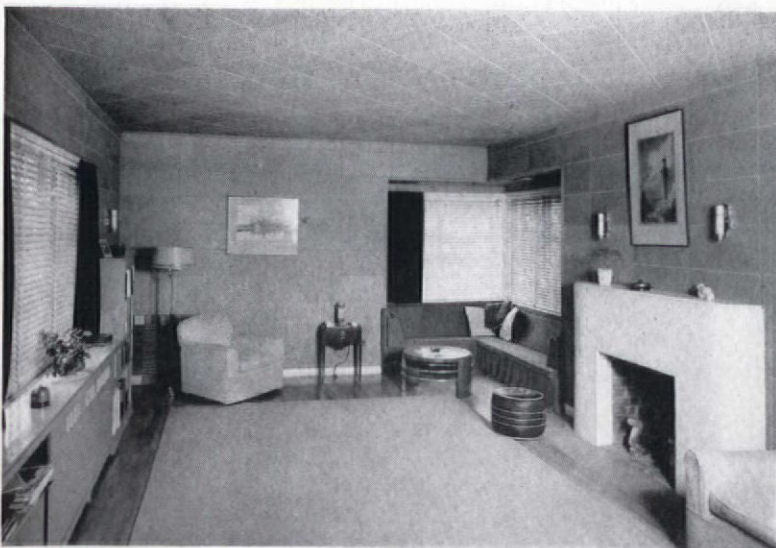
WINDOWS: Sash—wood casement. Glass—double strength, Libbey-Owens-Ford Glass Co.

FLOORS: Living room and halls—maple. Bedrooms, kitchen and bathrooms—pine covered with linoleum.

KITCHEN EQUIPMENT: Stove—Magic Chef, Pyro-fax gas.

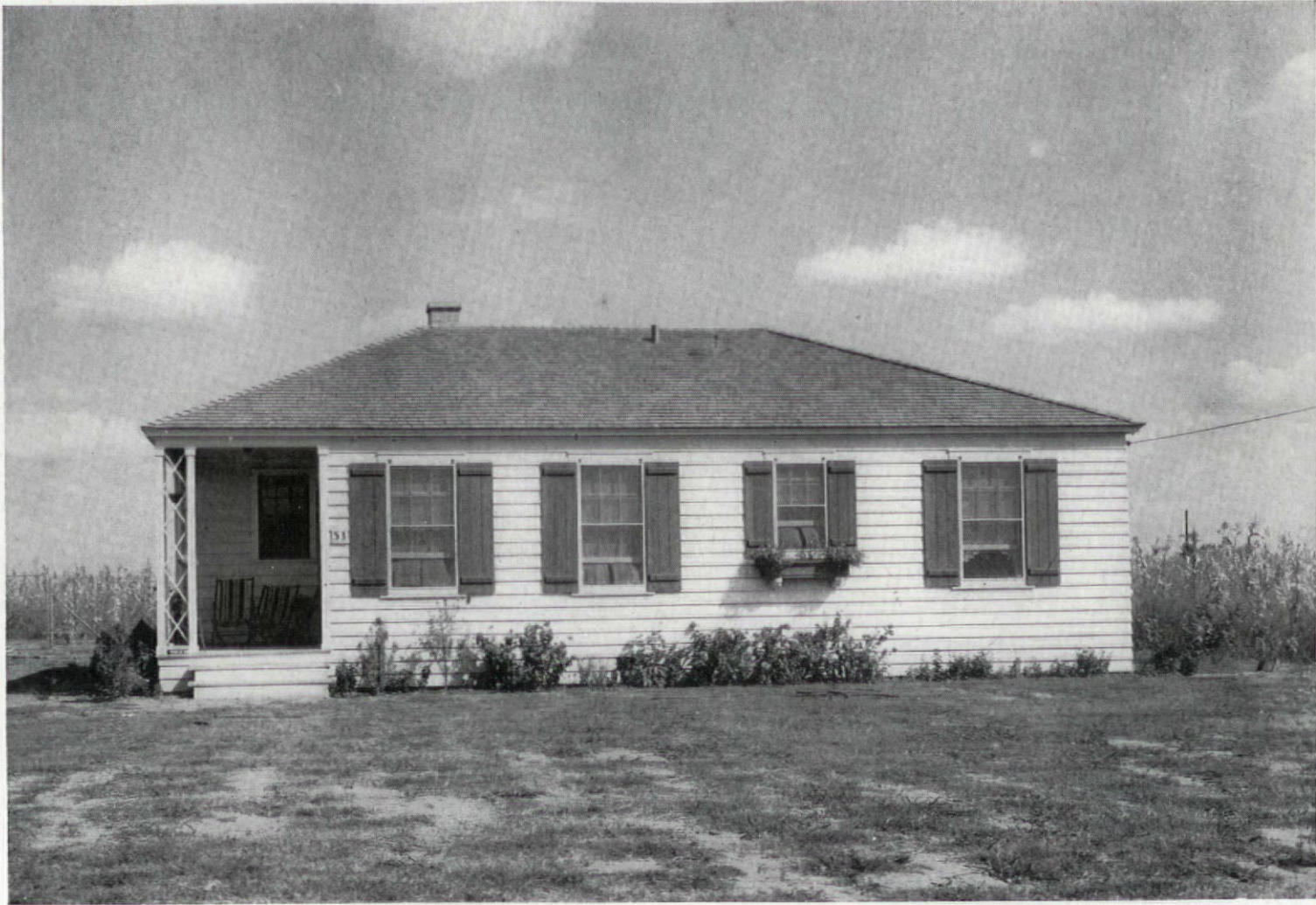
PLUMBING: All fixtures by Sears, Roebuck & Co. Septic system.

HEATING: Hot water. Boiler—Novus coal fired, and radiators, National Radiator Co.



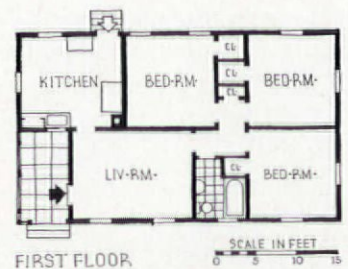
LIVING ROOM

13. HOUSE IN WICHITA FALLS, TEXAS



Frank Rogers

VOELCKER & DIXON, INC., ARCHITECTS
H. F. KUEHNE, SUPERVISING ARCHITECT



The example shown here, known as House No. 53 in a Re-settlement Administration low-cost suburban development which will contain 62 small houses, represents an attempt to provide the maximum of accommodations possible at a low price. All rooms have been placed within a simple rectangle for economy of construction, and many of the refinements frequently demanded in small houses today could not be included at the price. The small living room can be used for dining, but the kitchen is of sufficient size so that meals can be served in it. The house sells for \$3,261.50 on a 40-year payment plan, with the lot included in the purchase price. The lots in the development vary from one and a half to three and a half acres.

CONSTRUCTION OUTLINE

STRUCTURE: Beveled siding on 2 x 4 in. studs, 16 in. o.c., shiplap sheathing on inside, canvas covered with wallpaper.

ROOF: Wood shingles on shingle lath.

SHEET METAL WORK: 26 gauge galvanized iron.

WINDOWS: Sash—wood, double hung. Glass—single strength, quality B.

FLOORS: All rooms—yellow pine.

WOODWORK: Yellow pine.

PAINTING: Interior: Floors—stain and oil. Trim and sash—lead and oil. Exterior: Walls, roof and sash—lead and oil.

ELECTRICAL INSTALLATION: Wiring system—BX.

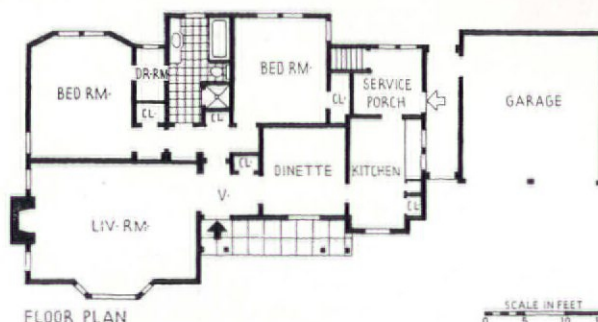
PLUMBING: Standard fixtures. Septic tank.

14. HOUSE FOR PAUL DONALDSON, LOS ANGELES, CALIF.



Fred R. Dopprich

GORDON J. ROGERS & IRWIN I. FRANTZ,
DESIGNERS AND BUILDERS



CONSTRUCTION OUTLINE

STRUCTURE: Frame, 3 exterior coats of cement plaster, 2 coats of waterproofing color, Wolmanized joists.

ROOF: Wood shingles over sheathing.

SHEET METAL WORK: 26 gauge galvanized iron.

WINDOWS: Double hung and casement.

FLOORS: All rooms—hardwood. Kitchen—linoleum covered. Bathrooms—tile.

WALL COVERINGS: Bedrooms and halls—wallpaper. Kitchen and bathrooms—Sanitas, Standard Textile Products Co.

PAINTING: Interior: Floors—1 coat filler, 2 coats shellac, 1 coat wax. Trim and sash—3 coats oil paint.

ELECTRICAL INSTALLATION: Wiring system—conduit system throughout.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Pipes—galvanized iron.

HEATING: Warm Air. Automatic thermostat water heater.

A small residence which follows the trend in present-day California domestic work. All rooms are located on the first floor level, with adequate separation between the living and dining rooms and other portions of the house. The service porch is a useful feature, suitable in a mild climate, such as that of southern California. Only two bedrooms were required for this house, and the one bath has been placed for convenient use as a guest lavatory as well. The exterior is typical in its use of brick, stucco, and wood, and relies for its effectiveness on the long horizontal lines generally adopted in this locality. Cost \$4,125, at \$3 per square foot.

15. HOUSE FOR MAX J. DERBES, NEW ORLEANS, LA.



HAROLD W. O'SHEA, ARCHITECT



CONSTRUCTION OUTLINE

STRUCTURE: Cedar grooved asbestos shingles on diagonally laid sheathing, 4 in. rock wool insulation, Steel-Tex metal lath and plaster, Johns-Manville, Inc.
ROOF: Asbestos shingles, Johns-Manville, Inc.
WINDOWS: Sash—casement and double hung, Monarch weatherstripping. Glass—double thick, Libbey-Owens-Ford Glass Co.
FLOORS: Living room, bedrooms and halls—oak. Kitchen—linoleum. Bathrooms—tile.
WALL COVERINGS: Kitchen and bathrooms—flex-board, Johns-Manville, Inc.
HARDWARE: By Sargent & Co.
PAINTING: Walls and ceilings—flat oil paint, Sherwin Williams. Floors—shellac and wax.
ELECTRICAL INSTALLATION: Wiring system—knob and tube.
PLUMBING: All fixtures by Kohler Co. Soil pipes—cast iron. Water supply pipes—brass.

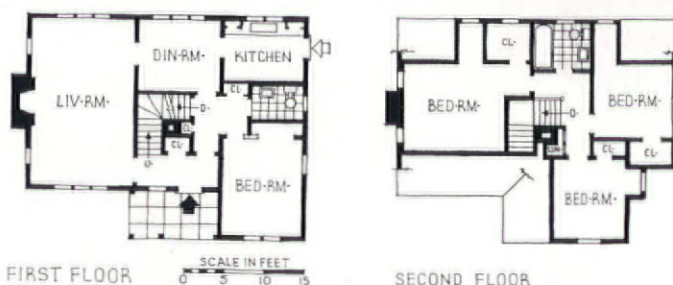
A substantial residence in the moderately priced field, thoroughly insulated, and designed to offer an intimate atmosphere. Due to the fact that the view and the greater part of the lot are available from the rear elevation, special emphasis has been placed upon the bay window of the master bedroom. Circulation is direct throughout, and the partition usually separating the dining from the living room has been almost completely eliminated in order to insure a dual purpose in the function of these elements. Cost: \$4,800. Cubage: 15,225 cubic feet at 30 cents.

16. HOUSE FOR H. E. WERST, SEATTLE, WASH.



Webster & Stevens

HOMES, INC., ARCHITECTS



CONSTRUCTION OUTLINE

STRUCTURE: Frame, bevel siding, 1 x 10 in. T. & G. cedar boards and battens, Celotex plaster base and 2 coat plaster.

ROOF: Wood shingles.

SHEET METAL WORK: Armco iron.

WINDOWS: Sash—casement, cedar sills and frames. Glass—Pennvernion, Pittsburgh Plate Glass Co.

FLOORS: Living room, bedrooms and halls—oak. Kitchen and bathrooms—fir, covered with linoleum.

WALL COVERINGS: All rooms—wallpaper, except enameled kitchen and bath.

HARDWARE: By Schlage Lock Co.

ELECTRICAL INSTALLATION: Wiring system—

knob and tube. Switches—tumbler.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co.

HEATING AND AIR CONDITIONING: Locally assembled plan, consists of fan and filters and warm air furnace and duct system, Colcock Furnace Co.

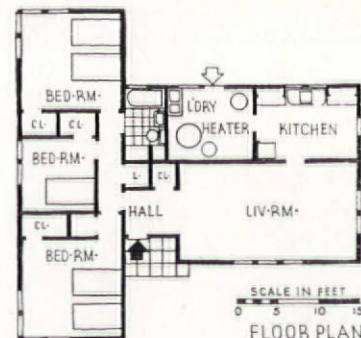
This house is logically built of the material prevalent in the surrounding timber area. The exterior combines ruggedness with charm, and the emphasis placed upon the porch is readily understood upon consideration of the climate. The first floor plan is noteworthy in the inclusion of a guest room, a feature which is becoming more and more popular. Cost: \$4,000. Cubage: 20,500 cubic feet at 20 cents.



J. C. Allen & Son

HOWARD T. FISHER, ARCHITECT
JOHN A. PRUYN, ASSOCIATE

This and the house on the opposite page were built in a realistic project to explore small house costs. Leading architects furnished the designs, and various industries made available their latest in materials and methods. Designed to accommodate the average family, the specifications fit the physical requirements of the mass of prospective home owners. However, they do not claim to represent the average American standard of living. The Number 2 house, pictured above, is externally covered with asbestos cement board, it is compact and extremely well planned to allow ample closet space; although only the minimum general requirements have been included for the sake of economy. Cost: approximately \$4,800.



CONSTRUCTION OUTLINE

STRUCTURE: Studs and Joists at panel points, No. 16 gauge copper bearing steel. Wall panels—built up wood frame with stiffeners. Exterior covering— $\frac{1}{4}$ in. asbestos cement board. Interior covering— $\frac{1}{4}$ in. regular fir plywood, painted.

FLOOR: Cinder fill, building paper, 4 in. reinforced concrete slab, trowel finish and painted.

ROOF: Built up wood frame with stiffeners. Ceiling—plywood, $\frac{1}{4}$ in. fir. Roof plywood, $\frac{3}{8}$ in. fir. Roofing—No. 24 gauge galvanized copper bearing steel. Flashing—No. 26 gauge, galvanized copper bearing steel.

INSULATION: Two separated sheets of aluminum foil in each panel.

WINDOWS: Steel, outswinging casements. Screens—aluminum.

HARDWARE: Windows—bronze. General—brass finish.

PAINTING: Lead and oil.

ELECTRICAL INSTALLATION: BX cable.

PLUMBING: Pipes—galvanized steel and cast iron. Fixtures—enameled iron.

HEATING: Forced warm air automatically controlled, automatic oil fired.

18. HOUSE IN LAFAYETTE, IND. PURDUE HOUSING PROJECT



LIVING ROOM



DINING ALCOVE

J. C. Allen & Son Photos



INSULATED STEEL CONSTRUCTION CO.
DESIGNERS AND BUILDERS

Steel has been used almost exclusively in the construction of this residence. The arrangement including the increased height of the living room area interrupts the exterior wall surfaces sufficiently to avoid the appearance of a "shoe box." The plan is unusually compact and economical in space arrangement, the three outstanding features being the elimination of waste space in the hall; the small space required for the heating equipment; and the additional use of the garage for laundry purposes. Cost: approximately \$5,000.

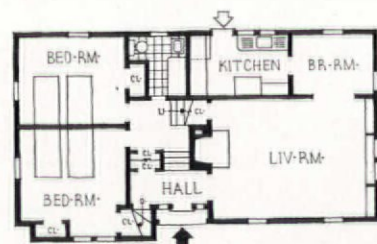
CONSTRUCTION OUTLINE

STRUCTURE: Walls—frameless steel sections, painted. Sections filled with insulating material. Walls and ceilings—plastic paint finish. Exterior trim—cypress.
ROOF: Cellular steel construction, 1 in. rigid insulation board, standard type built up roofing, No. 26 gauge iron flashing.
WINDOWS: Wood, double hung.
FLOORS: Concrete, 1:2:4, troweled finish 1:2, on fill; 13/16 in. hardwood laid on 2 x 4 in. creosoted sleepers. Kitchen and bathroom—linoleum.
ELECTRICAL INSTALLATION: BX cable.
PLUMBING: Pipes—cast, galvanized and black iron. Water heater—30 gal. range boiler with thermostat. Fixtures—enameled iron.
HEATING: Forced warm air, gas fired furnace, automatically regulated.



Murray M. Peters

THEODORE WHITEHEAD DAVIS, ARCHITECT



FLOOR PLAN

SCALE IN FEET
0 5 10 15

A shift in levels made possible some interesting variations in this house plan. Living room, breakfast room and kitchen are located on one level, and the two bedrooms and bath are placed four steps above. One result of the arrangement is to effect a distinct separation between the two parts of the house, with a consequent increase of privacy for each part. Another is to permit the placing of stairs and closets on staggered levels, allowing a maximum utilization of storage space. Indirect circulation has resulted from the change in levels: for example, the only access to the kitchen from the sleeping quarters is through the hall, down the steps, and through living room and breakfast room; whether this is a serious inconvenience in a house of this size and type is, however, questionable. The exterior is a simple design using stock materials. Cost: \$6,500, at about 33 cents.

CONSTRUCTION OUTLINE

STRUCTURE: Wood frame, 2 x 4 in. studs, 1 in. sheathing, building paper, 24 in. Royal shingles. Inside—hard white plaster on wood lath.
ROOF: 18 in. Perfection shingles.
SHEET METAL WORK: Copper throughout.
INSULATION: Roof—Balsam wool, 1½ in.
WINDOWS: Double hung wood, 1½ in. Glass—single strength. Screens—full length, copper in wood frames.
FLOORS: All rooms—oak, except tile in bathroom and linoleum in kitchen.
WOODWORK: All white pine.
ELECTRICAL INSTALLATION: Wiring system—3 wire BX cable. Switches—tumble.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply—brass.
HEATING: Steam, boiler—Kewanee, with oil burner. Radiators—American Radiator Co. Thermostat—Minneapolis-Honeywell Regulator Co. Hot water heater—Taco.

20. HOUSE FOR H. N. FELTON, SUMMIT, N. J.



John Reinert

WILLIAM M. PAREIS,
ARCHITECT



CONSTRUCTION OUTLINE

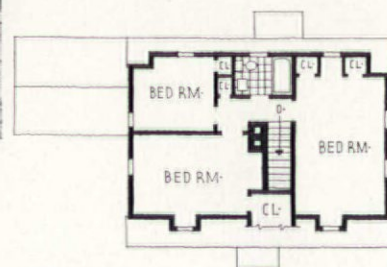
STRUCTURE: Frame, shingles, paper and sheathing, 4 in. rock wool, sheet rock and 3 coats of plaster.
ROOF: Wood shingles.
SHEET METAL WORK: Copper.
INSULATION: Walls and ground floor—4 in. rock wool.
WINDOWS: Curtis Silentite, weatherstripped.
FLOORS: Red oak, tile in baths, linoleum in kitchen.
WALL COVERINGS: All rooms—wallpaper, except paint in kitchen and bathrooms.
HARDWARE: By P. & F. Corbin.
ELECTRICAL INSTALLATION: Wiring system—BX cable. Switches—toggle.
KITCHEN EQUIPMENT: Stove—gas. Refrigerator—Kelvinator, electric.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Water supply pipes—brass.
HEATING AND AIR CONDITIONING: Carrier Engineering Co.

A well built and soundly designed house, featuring the off-axis entrance. The cornice treatment over the garage doors and the recessed entry afford ample protection from inclement weather. The plan is outstanding in its simplicity, the built-in cabinets in den, living room, kitchen, and dining room have been integrated in the design of the rooms themselves, thus reducing the problem of fitting in furniture designed ex tempore. Approximate cost: 33½ cents per cubic foot.

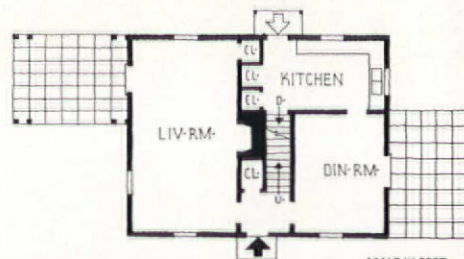
21. HOUSE IN NORWALK, CONN. ALFRED W. GRANT, ARCHITECT



Colonial cottage forms were carefully followed in this residence, recently erected as a Model House in Norwalk. The dormers, small sixteen-light windows, elliptical entrance shelter, and the low, square chimney are characteristic features. In plan as well as exterior design the house is entirely conventional: three bedrooms and a bath occupy the second floor and the first floor has a central chimney and stairway dividing the living room from the dining room and kitchen. Cost: \$7,800 at 42.5 cents per cubic foot.



SECOND FLOOR



FIRST FLOOR



KITCHEN

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—frame construction, Perfection red cedar shingles. Inside—plastered throughout except for wood paneled walls in living room.

ROOF: Perfection red cedar shingles on shingle lath.

INSULATION: Rock wool over second floor ceiling, Johns-Manville.

WINDOWS: Sash—double hung throughout except in kitchen, all weatherstripped. Glass—single strength, Pittsburgh Plate Glass Co.

FLOORS: All rooms—No. 2 select white oak, except medium gauge linoleum laid over fir flooring in kitchen and bath.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle.

KITCHEN EQUIPMENT: Combination laundry tub and sink—Standard Sanitary Mfg. Co.

PLUMBING: Soil pipes—extra heavy cast iron. Water supply pipes—copper tubing. Hot water heater—Wels-back Hotzone, 30 gal. automatic gas.

HEATING AND AIR CONDITIONING: Forced air with humidifier and filters, no cooling, Dail Steel Products Co. Delco oil burner with thermostatic control.

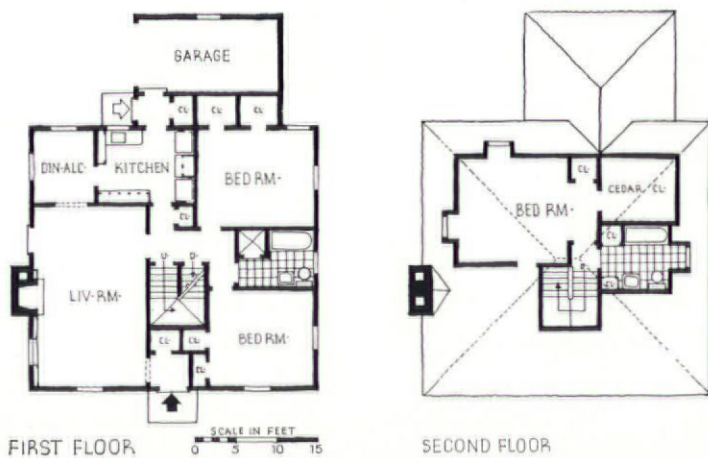
VENTILATION: ILG ventilating fan in attic, ventilating kitchen and upper hall.

22. HOUSE FOR STANLEY MacGOVERN, MALVERNE, L. I.



Murray M. Peters

FRANK M. CREIGHTON, ARCHITECT



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—2 x 4 in. studs, $\frac{7}{8}$ in. sheathing, paper, Clinton wire cloth and stucco; inside—wire lath and plaster.

ROOF: Wood shingles on shingle lath.

SHEET METAL WORK: Flashing and leaders—copper. Gutters—cypress wood.

INSULATION: Roof—rock wool over occupied portions of second floor.

WINDOWS: Sash—wood, except steel in kitchen and basement. Storm sash on north and west sides. Glass—double strength, quality A.

FLOORS: Living room and halls—oak. Bedrooms: No. 1—oak, No. 2—pine and linoleum, No. 3—pine. Kitchen—pine and linoleum. One bathroom tile, the other linoleum over pine.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle.

KITCHEN EQUIPMENT: Stove—gas. Refrigerator—electric.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—cast and galvanized iron. Water supply pipes—copper tubing.

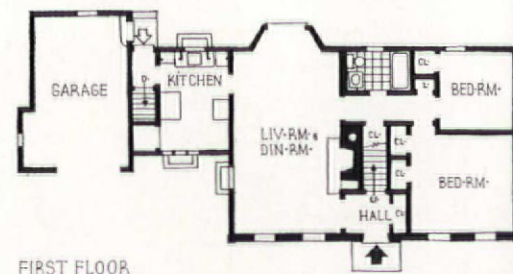
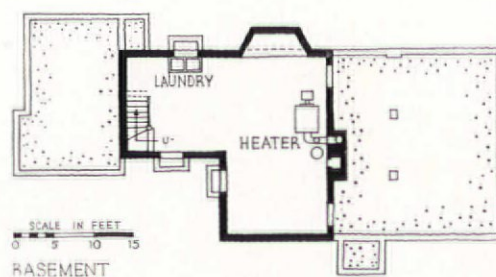
HEATING: Steam, one pipe gravity return. Hot water heater—Taco unit with aquastat for summer, Monel metal tank.

A square plan, with a garage addition, here resulted in good accommodations at a moderate cost. The house is essentially of the one-story type, with an additional bedroom and storage space in the attic. The plan permits cross ventilation in all major rooms, and it has been well studied to provide easy circulation, privacy for the bedrooms, and wall space for the convenient placing of furniture. A combination of service and garage entrances allows for easy access with a minimum of space. Both exterior and interiors show restraint and an intelligent striving for simplicity in design. Cost: \$6,800.

23. HOUSE FOR HARRY M. SISSON, WESTFIELD, N. J.



V. M. REYNAL, ARCHITECT



The advantages of a well landscaped site are apparent here. The trees are large enough to provide an attractive setting, but are not so thick that they cut off light and air from the main rooms. In contrast with its background the house has been kept simple in form and light in color. All living rooms are on the ground floor; there might be some inconvenience in a plan which provides only one entrance to the bedroom portion, particularly when that entrance is off the living room, but this would depend on the requirements of the occupants. The living room has been made as large as possible, since it serves as dining room also, and the large bay, suitable for use as a dining alcove, can be almost completely opened in good weather. Construction cost: 24 cents per cubic foot.

CONSTRUCTION OUTLINE

STRUCTURE: Front walls—second hand brick, 1 in. air space, 15 lb. paper, sheathing, studs, spruce lath and 3 coat plaster. Other exterior walls—same, except 18 in. wood shingles on outside.
ROOF: Red cedar shingles on shingle lath.
SHEET METAL WORK: 16 oz. copper.
INSULATION: Roof—4 in. rock wool.
WINDOWS: Double hung, except casements in kitchen. Glass—single strength, quality A.
FLOORS: Living room and bedrooms—white oak. Kitchen—linoleum. Bathrooms—tile.
WALL COVERINGS: All rooms—wallpaper, except tile wainscot and paint in bathrooms.
ELECTRICAL INSTALLATION: Wiring and switches—General Electric.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply pipes—brass.
HEATING: One pipe steam, Master Kraft boiler, Arco convectors.

24. HOUSE FOR EARL KATZENSTEIN, CHAPPAQUA, N. Y.



John Goss

EMIL J. SZENDY, ARCHITECT



A formality uncommon in small residences today has been achieved in this Westchester house by the use of French domestic precedent of the eighteenth century. In keeping with the style, complete symmetry has been maintained in all but the rear elevation. Dormers typical of the period, also symmetrically disposed, serve to light and ventilate the two upstairs bedrooms. The house approaches a minimum in its provision of accommodations: the living room is used for dining as well, there is no basement, and entrance to the kitchen is directly from the outside. To save space the heater room is placed under the main stair and is easily accessible from the kitchen. An attractively shaded terrace opens off the living room. Cost: \$7,500.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—cinder block painted with 2 coats Portland cement paint. Inside—lath and plaster.

ROOF: Wood frame shingles with 2 in. rock wool blanket for roof and dormer insulation.

INSULATION: Reynolds metallation.

SHEET METAL WORK: Copper throughout.

WINDOWS: Wood, casement; kitchen and upper bath—double hung, zinc weatherstripping. Screens—32 gauge, 16 mesh bronze.

FLOORS: Concrete floors, covered with random width red oak in living room and linoleum in kitchen and bath.

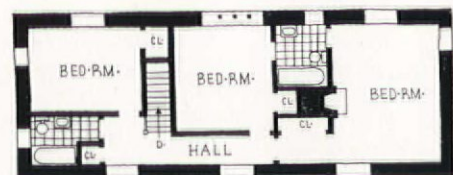
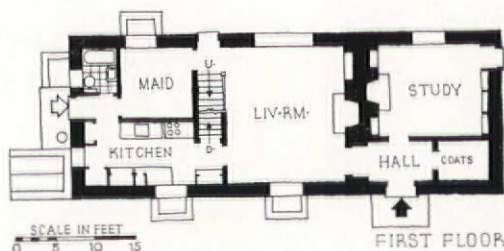
WOODWORK: Living room—finished in knotty pine paneling, exposed beam ceiling.

ELECTRICAL INSTALLATION: Rigid conduit under first floor, all other BX.

PLUMBING: Fixtures—Kohler Co. Hot Point 40 gal. electric tank, ice box and stove.

HEATING AND AIR CONDITIONING: Air conditioned, oil burner.

25. HOUSE FOR MATTHEW W. BLACK, BERWYN, PA.



EDWARDS & HOFFMAN, ARCHITECTS

A residence of permanence apparent in the heavy rubble work, typical of the locality. The feeling of strength is emphasized through the wide spacing of window openings. The large scale of the stones themselves tends to decrease the actual area of the windows. The house will undoubtedly gain a great deal when the landscaping has been developed. The plan has spacious appointments, and, although the staircase is placed at some distance from the main entrance, it is centrally located and easily accessible from all rooms. Cost: \$9,883. Cubage: 29,344 at 33 $\frac{1}{4}$ cents.

CONSTRUCTION OUTLINE

STRUCTURE: 18 in. local stone, 2 in. furring, U. S. Gypsum rock lath and plaster.

ROOF: Shingle tile, Ludowici-Celadon Co.

SHEET METAL WORK: Copper.

INSULATION: Attic floor— $\frac{1}{2}$ in. Celotex lath on second floor ceiling.

WINDOWS: Steel casements, medium weight, J. S. Thorn Co. Glass—double thick, quality A.

FLOORS: Living room—No. 2 white oak. Bedrooms—grade A yellow pine. Kitchen—linoleum. Bathrooms—rubber tile.

HARDWARE: By Yale & Towne.

ELECTRICAL INSTALLATION: Wiring system—BX conduits, 3 wire. Switches—toggle.

KITCHEN EQUIPMENT: Stove—gas, Pyrofax. Refrigerator—General Electric Co. Sink—enameled cast iron, acid resisting enamel.

PLUMBING: Soil pipes—cast iron. Water supply pipes—copper, soldered fittings, Revere Brass & Copper Co.

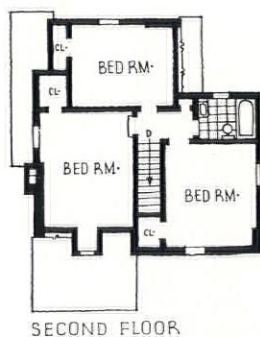
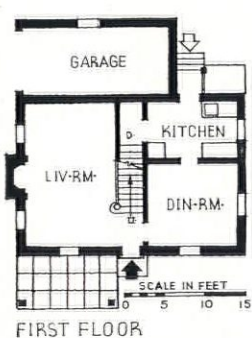
HEATING AND AIR CONDITIONING: Warm air, filtering and humidifying, Lennox Oilfyre furnace, filters, Timken oil burner.

26. HOUSE IN ROSEMONT, PA.



Philip B. Wallace

FLANIGEN & FLANIGEN, INC., DESIGNERS



CONSTRUCTION OUTLINE

STRUCTURE: Stone veneer on 2 x 4 in. studs, wall sheathed with 6 in. roofers covered with felt, plaster on wood lath.

ROOF: Asphalt shingles.

SHEET METAL WORK: Flashing—tin. Gutters—galvanized iron.

WINDOWS: Double hung, Curtis Silentite. Glass—single strength, quality A.

FLOORS: Living room—oak. Bedrooms—pine. Kitchen—linoleum. Bathrooms—rubber tile.

WALL COVERINGS: Wallpaper throughout, except painted bathroom.

WOODWORK: Curtis stock.

HARDWARE: By P. & F. Corbin.

PAINTING: Floors—shellac. Trim and sash—lead and oil.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle.

KITCHEN EQUIPMENT: Stove—gas, Quality. Cement laundry trays.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply pipes—galvanized iron.

HEATING: Hot water. Boiler—Barco coal fired.

The severity of the stone work is agreeably relieved by small areas of wooden siding; the treatment of the dormer windows is especially successful. There is, however, a noticeable vertical break in the roof line not altogether pleasant, since it occurs practically in the middle of the composition. The plan is ideally suited for the corner lot, and the garage is so located that it does not detract from the interest of the main entrance. Cost: \$6,000. Cubage: 25,000 at 24 cents.

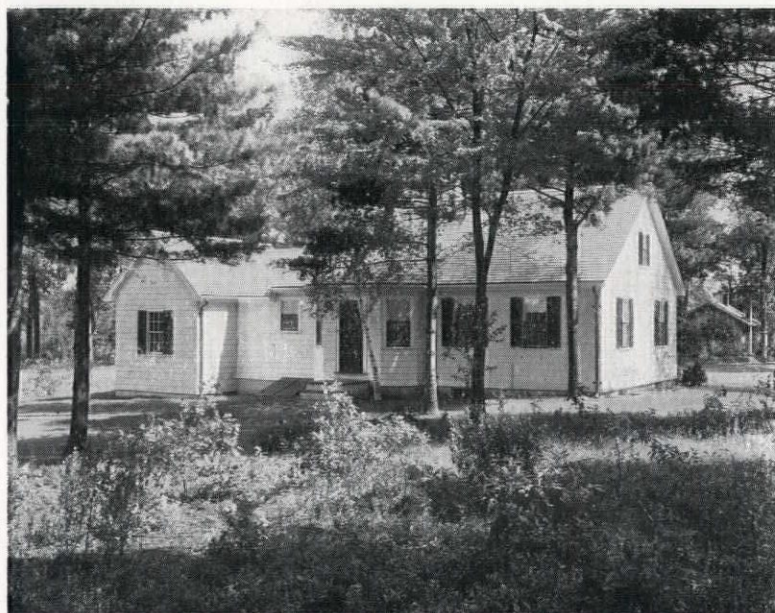
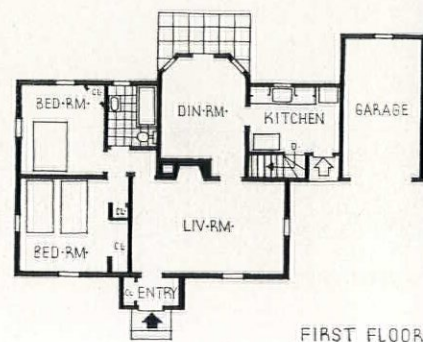
27. HOUSE IN COOLIDGE PARK, WAKEFIELD, MASS.

EARL C. DAVIS,
ARCHITECT



Benjamin Morse Photos

Simply designed and well built, this example is entirely lacking in the pretentiousness which mars so many small houses. Shutters and the simple porch railing are not only economical, but add materially to the interest of the exterior. The plan is extremely compact and so designed that the basement becomes available as recreational area. Cost: \$5,600.



REAR ELEVATION

CONSTRUCTION OUTLINE

FOUNDATION: 12 in. concrete.
STRUCTURE: Wood shingles, building paper, sheathing, frame. Inside—lath and plaster.
ROOF: Wood shingles.
SHEET METAL WORK: Copper throughout, gutters—fir.
WINDOWS: Wood, double hung.
FLOORS: Hardwood, oak.
WOODWORK: Paneling in dining room—knotty pine. Trim, shelves and cabinets—pine.
WALL COVERINGS: Wallpaper in living room and bedrooms. Tile wainscot in kitchen and bath, oil paint above.
KITCHEN EQUIPMENT: Electric refrigerator and range. Cabinets—wood, linoleum covered counters.
ELECTRICAL INSTALLATION: BX, 3 wire.
PLUMBING: Soil pipes—cast iron. Cold water pipes—galvanized iron.

28. HOUSE FOR DR. JOSEPH A. SHEA, WEST ORANGE, N. J.



Adolph Study Jr.

R. C. HUNTER, ARCHITECT



CONSTRUCTION OUTLINE

STRUCTURE: Stone veneer and shingles on frame, hard finished white plaster.

ROOF: Wood shingles.

SHEET METAL WORK: Copper. Gutters—wood.

INSULATION: Second floor ceiling—4 in. rock wool.
WINDOWS: Double hung and casement, weather-stripped. Glass—quality A, Libbey-Owens-Ford Glass Co.

FLOORS: Living room and bedrooms—white oak. Kitchen—linoleum. Bathrooms—tile.

WALL COVERINGS: Living room and bedrooms—wallpaper. Bathrooms—tile and paint.

WOODWORK: Trim—wood. Doors—white pine.

PAINTING: Exterior: Walls and sash—3 coats lead, oil and zinc paint.

ELECTRICAL INSTALLATION: Wiring system—BX cable. Switches—toggle.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Water supply pipes—No. 85 copper tubing.

The vast expanse of roof is admirably balanced by the varied textures of wall materials and the unusual handling of the porch terminating the living room. The dormer windows are connected in order to emphasize the vertical plane of the main elevation. The plan, especially in the areas surrounding the main entrance, has several original features with ample provisions for lavatory, coat closet, and stair accessibility in a minimum of wasted space. Approximate cost: 35 cents per cubic foot.

29. HOUSE FOR ERNEST L. RUH, WESTFIELD, N. J.



LUCHT & ANDERSON, ARCHITECTS
M. B. BOHM, ASSOCIATE



FIRST FLOOR

CONSTRUCTION OUTLINE

STRUCTURE: Stucco on wire lath, sheathing, wood studs. Inside—Masonite in patterns.

ROOF: Wood rafters and shingles.

SHEET METAL WORK: Copper throughout.

INSULATION: Outside walls—metal rock lath. Attic floor—rock wool.

WINDOWS: Living rooms, dining room and master's bedroom—special wood casement. Steel in remainder of the house, all weatherstripped.

FLOORS: All rooms—tempered Presdwood, linoleum covered in master's bedroom and kitchen. Bathrooms—tile.

PAINTING: Interior: All Masonite walls—2 coats flat paint. Exterior—white washed, wood, painted. Roof—stained.

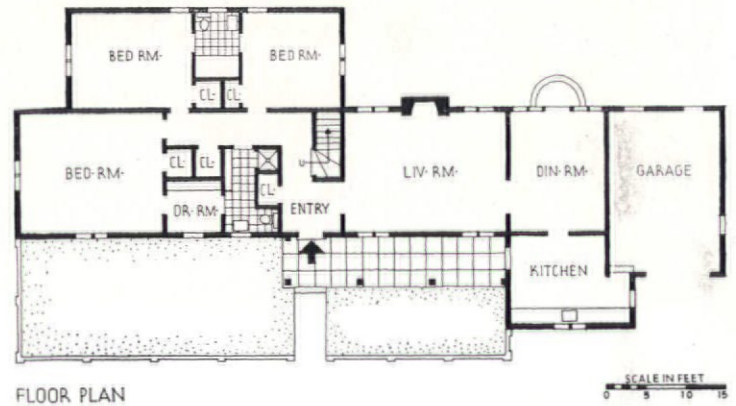
KITCHEN EQUIPMENT: Stove—gas. Refrigerator—electric, Frigidaire.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Water supply pipes—copper tubing.

HEATING: Superfex, oil fired, Perfection Stove Co.

A comparison between this and the Alexandria house on page 435 is of interest for the degree in which they have departed from stylistic precedent. Similar in fenestration and the use of terrace space, they differ noticeably in form. The example shown here has maintained the roof formation and general mass characteristic of the one-story Colonial house, but has ignored the symmetrical window placing and other exterior features of this type. The plan meets the modest requirements with ample room sizes and an efficient layout. The arrangement of the service portion is excellent, and the introduction of a separate entrance to the bedrooms from this part aids convenient circulation. The house is a part of Wychwood, a restricted suburban development for residences ranging from \$5,000 to \$50,000. Cost, including landscaping, terrace, and driveway: \$9,000. Cubage: 24,000.

30. HOUSE IN SAN MATEO, CALIF., ED. MUSSON SHARPE, ARCHITECT



CONSTRUCTION OUTLINE

STRUCTURE: Frame construction, sheathing, metal lathed and plastered inside.

ROOF: Hand-split redwood shakes.

SHEET METAL WORK: Galvanized iron.

WINDOWS: Double hung and casement, some steel. Glass—double strength, quality A. Screens—roller, bronze.

FLOORS: Living room, dining room and halls—plank flooring. Kitchen and bathrooms—linoleum covered.

KITCHEN EQUIPMENT: Stove—gas. Refrigerator—General Electric Co. Sink—Crane Co.

PLUMBING: All fixtures by Crane Co. Soil pipes—cast iron. Water supply pipes—galvanized iron.

HEATING: Hot air with blower and glass fiber filter, gas fired boiler.

This low rambling house, ideally suited to the amenities of a southern climate, is an intelligent adaptation of mission and early ranch architecture. The wall contiguous to the public sidewalk affords ample privacy and screens the garden from the street. The central hall affords a separating element between bedrooms and living area, thus eliminating all friction between these varied functions. Practically every major room is cross ventilated, a desirable feature in any design. Cost: \$8,500. Cubage: 24,000 at 35½ cents.

31. HOUSE FOR VINCENT K. CATES, MELROSE, MASS.

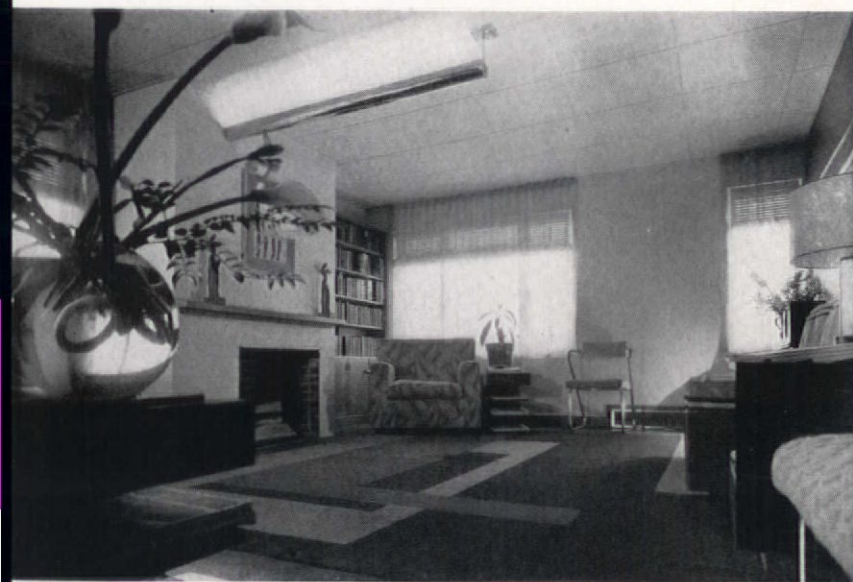


George H. Davis Photos

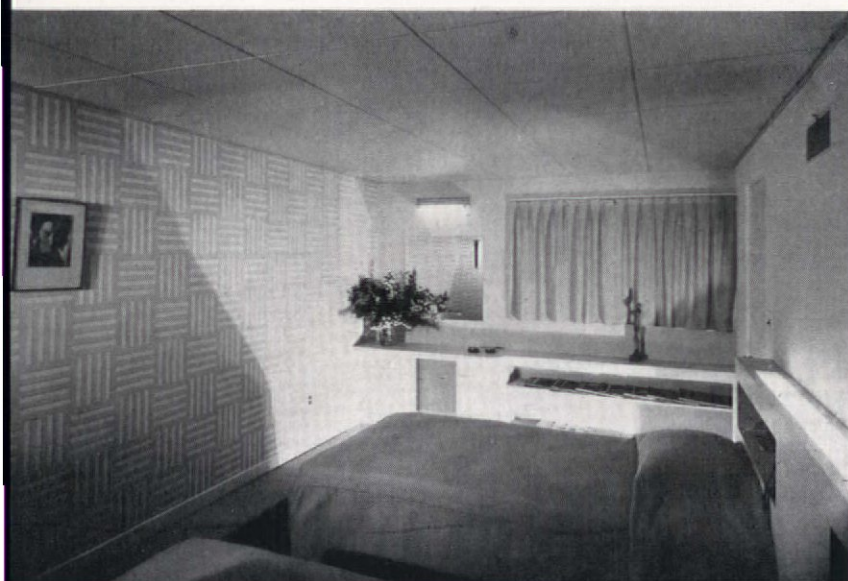
The simple forms of both plan and elevation offer an economical and attractive design. The overall horizontal pattern alternating with continuous window surfaces makes an ideal background for the landscaping. Furthermore, the long and low garden wall not only insures privacy, but is invaluable in accentuating the general mass of the structure. The location of the service elements toward the front of the house orients the main living elements toward the garden in the rear, while providing direct access to the upstairs bedrooms and terraces. Cabinets, bookcases, and other furnishings are built-in and integrated with the lighting and interior coloring to produce an harmonious whole. Cost: \$7,200. Cubage: 23,200 at 31 cents.



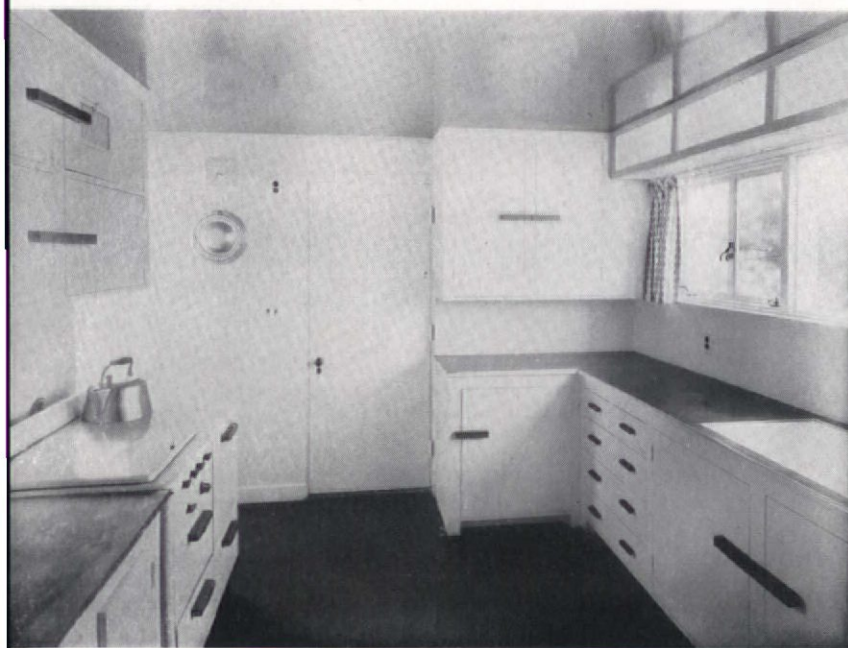
ENTRANCE



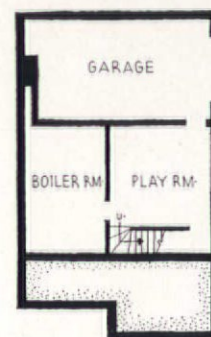
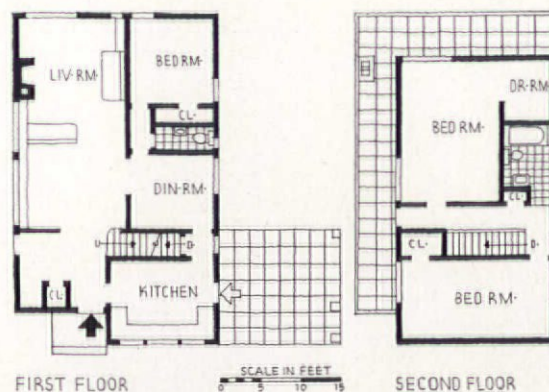
LIVING ROOM



BEDROOM



KITCHEN



BASEMENT

CONSTRUCTION OUTLINE

FOUNDATION

Walls—12 in. concrete block. Cellar floor—4 in. stone concrete on cinder fill. Waterproofing—membrane in floor and exterior walls below grade.

STRUCTURE

Exterior walls—2 x 4 in. stud balloon frame; 1 in. Thermasote insulating board; siding 8 in. to weather; ½ in. Homasote inside. Floor construction—wood joists and rafters. Ceilings—½ in. Homasote, except living room which is 24 x 24 in. acoustic tile.

ROOF

Construction—wood joists and rafter and T & G roofers, covered with 1 in. Thermasote and built up roofing.

SHEET METAL WORK

Flashing—16 oz. soft copper. Gutters and leaders—copper.

INSULATION

See structure and roof.

WINDOWS

Sash—standard light-weight sections for operating sash, Hope Windows, Inc., Getty operators. Glass—double strength, quality B, Libbey-Owens-Ford Glass Co. Screens—bronze wire on standard metal frames.

FLOORS

First and second floors—½ in. selected pine roofers, covered with carpet. Kitchen, lavatory and bath—linoleum.

WOODWORK

Doors—flush panel veneered and painted. Garage doors—Overhead sectional door.

PAINTING

Interior: Walls and ceilings—U. S. Gypsum metal strips over joints and Textone plastic paint. Trim and sash—flat oil paint. Exterior: Walls—3 coats lead and oil; all exterior metal work—gray metal paint. All paint by Pratt & Lambert.

PLUMBING

Standard fixtures. Soil pipes—cast iron. Water pipes—copper tubing.

HEATING

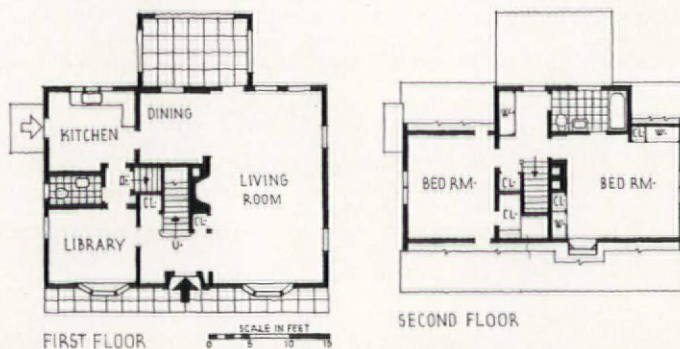
Warm air, provision made for future air conditioning.

32. HOUSE FOR LEONARD CHAMBERLAIN, MIDLAND, MICH.

FRANTZ & SPENCE,
ARCHITECTS



R. W. Tehbs Photos



CONSTRUCTION OUTLINE

STRUCTURE: Frame, cedar siding, wood sheathing and Sisalkraft paper, $1\frac{1}{2}$ in. rock wool, plaster, papered or lined with No. 2 common white pine.

ROOF: Wood shingles on roof boards.

SHEET METAL WORK: Armco iron, American Rolling Mills Co.

INSULATION: Outside walls— $1\frac{1}{2}$ in. rock wool. Attic floor—3 in. rock wool.

WINDOWS: Sash—double hung, white pine, weather-stripped. Glass—double strength, quality A.

FLOORS: Living room, halls and library—Bruce plank. Bedrooms—oak. Kitchen and bathrooms—gauge A linoleum.

WOODWORK: Trim and doors—white pine.

ELECTRICAL INSTALLATION: Wiring system—Romex. Switches—toggle, Hart & Hegeman.

PLUMBING: All fixtures by Kohler Co. Soil and vent pipes—cast iron. Water supply pipes—Type L, Anaconda.

HEATING AND AIR CONDITIONING: Warm air, filtered and humidified, gas fired boiler. Hot water heater—Ruud.

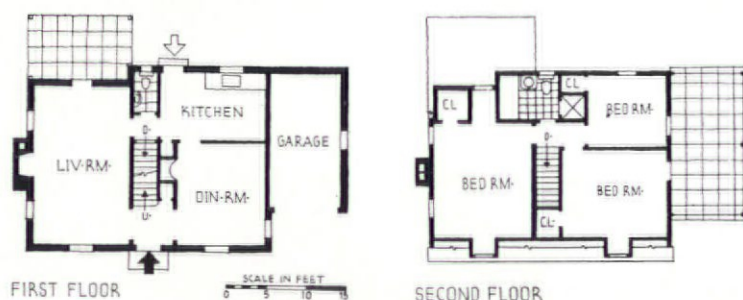
The combination of bay window, wide roof projection, and trellis is an original and charming conception, enhanced by the pleasant variation of stucco and horizontal wood board siding. The plan displays ingenuity in its use of a traditional precedent, altered to include a spacious and amply closeted entrance hall, a library, and a lavatory. Particular regard has been paid to the location and space requirements of the many mechanical and electrical devices mandatory in the contemporary home. Cost: \$8,500. Cubage: 20,000 at 42 cents.

33. HOUSE IN WEST HEMPSTEAD, LONG ISLAND, N. Y.



Gustav Anderson Photos

M. R. JOHNKE, ARCHITECT, W. F. McCULLOCH, ASSOCIATE



CONSTRUCTION OUTLINE

STRUCTURE: Frame with stone veneer on front. Brick veneer on sides and rear. Second story—Colonial siding, 8 in. to weather.

ROOF: Sheathing, felt and slate.

SHEET METAL WORK: 16 oz. copper.

INSULATION: Second floor ceiling—Celotex.

WINDOWS: White pine stock, double hung. Glass—single strength, Pennvernon, Pittsburgh Plate Glass Co. Screens—copper mesh.

FLOORS: Living room, bedrooms and halls—red oak. Kitchen—linoleum. Bathrooms—tile.

WOODWORK: Trim and doors—white pine.

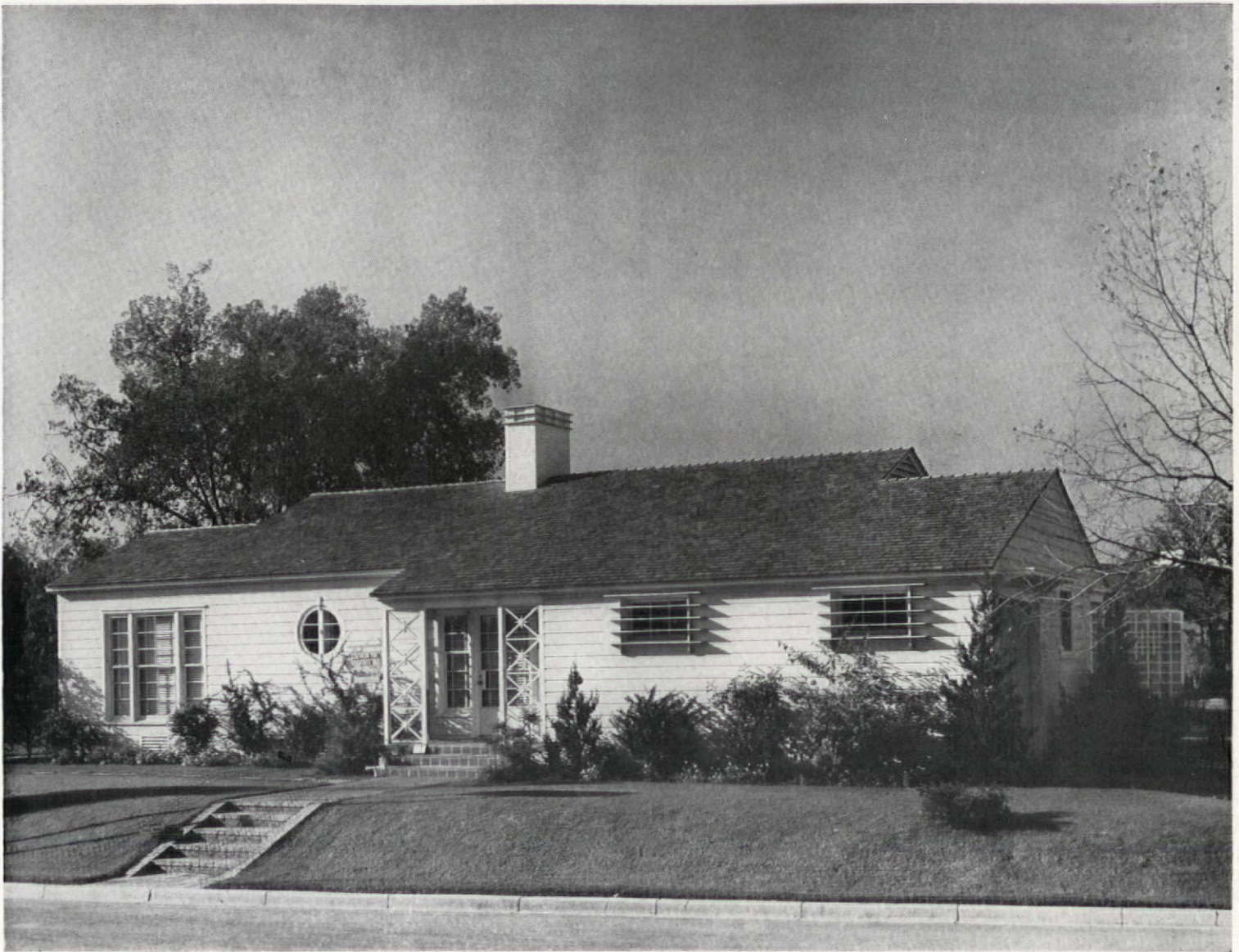
ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle type.

PLUMBING: All fixtures by Kohler Co. Soil and vent pipes—cast iron and galvanized iron. Water supply—copper tubing, Chase Brass & Copper Co.

HEATING: One pipe steam. Boiler—oil fired.

In comparatively few instances is the combined use of ashlar and frame construction successfully handled: this example is outstanding in this respect, and in the preservation of the intimate scale mandatory in the architecture of the small house. The front entrance has been handled with a refinement which bespeaks the knowledge of its designer in molding silhouettes. This house is amply equipped with baths and adequate closet space while the treatment of the central portions of the plan allows for additional storage and entrance hall facilities. Cost: \$5,500. Cubage: 18,289 at 29½ cents.

34. SOUTHERN PINE MODEL HOME, TEXAS CENTENNIAL EXPOSITION



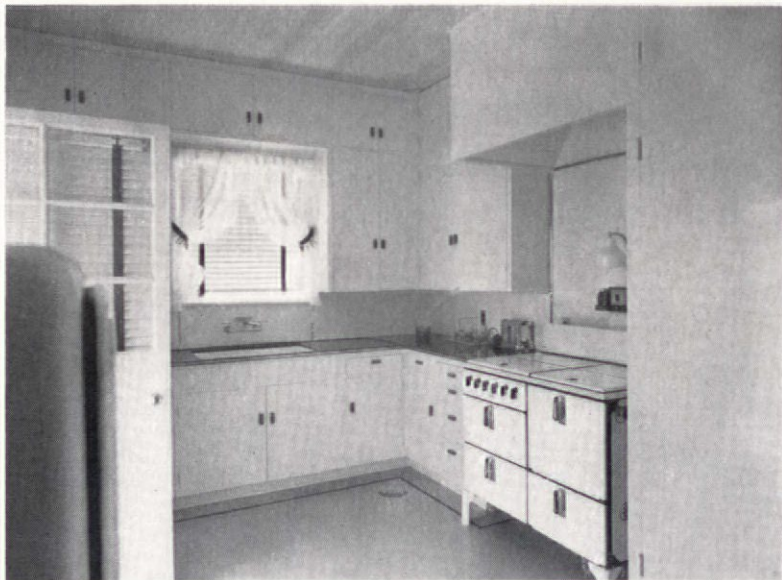
Paul R. Clegg

The "dry built" contemporary house, constructed entirely of wood, is an outstanding exhibit in the Texas Centennial Exposition. Primarily a model home, it has charm and an air of permanence. The plan permits the outdoors to be seen from any point within the house through large windows and openings. Cross ventilation, abundance of sunlight, and arrangement of interior furnishings have been carefully provided. The decorative scheme is original and simple, giving a pleasant external appearance. The architects designed this home as a demonstration for the moderately priced residential field; as such it includes garage, two bedrooms, and ample porch area. Cost: \$6,500. Cubage: 21,000 at 30½ cents.



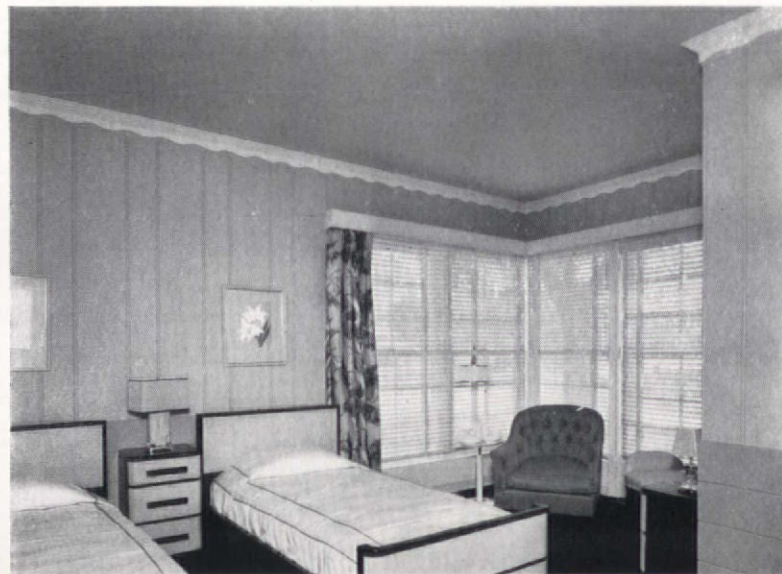
ENTRANCE

Paul R. Clegg



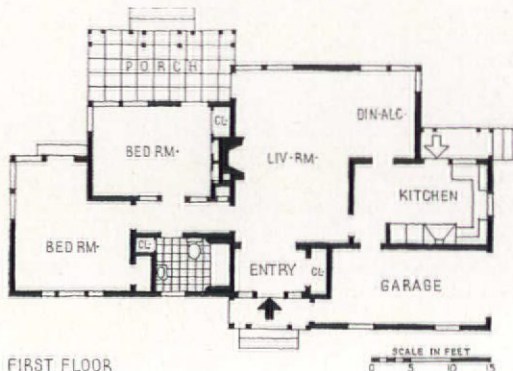
KITCHEN

F. A. McDaniels



BEDROOM

F. A. McDaniels



FIRST FLOOR

CONSTRUCTION OUTLINE

FOUNDATION
Reinforced concrete, grade beam, 8 x 20 in., 10 in. concrete piers to rock, wood girders over concrete piers.

STRUCTURE
Exterior walls—yellow pine siding, 30 lb. asphalt felt over 1 x 8 in. shiplap, 2 x 4 in. studs. Inside: 1 x 8 in. shiplap where canvas and paper occur. Finish: horizontal boarding nailed directly to studs, vertical boarding over 1 x 4 in. stripping. Floor construction—continuous galvanized iron metal termite shields under all plates and around all pipes, etc., 2 x 10 in. joists, 16 in. o. c., 1 x 6 in. sub-floor, 15 lb. asphalt felt, 1 x 4 in. B&B edge grain pine flooring.

ROOF
Construction—2 x 4 in. rafters, 16 in. o. c., 2 x 4 in. collar beams every fourth rafter. Covered with 1 x 4 in. shingle lath, 18 in. cypress shingles, Burton Swartz Cypress Co., Florida.

SHEET METAL WORK
Flashing—galvanized iron, painted both sides with red lead.

WINDOWS
Sash—B&B yellow pine, double hung. Glass—quality A, double strength, Libbey-Owens-Ford Glass Co. Screens—full length, top hinged, B&B yellow pine, galvanized iron.

FLOORS
Living room, bedrooms and halls—1 x 4 in. edge grain yellow pine. Kitchen—linoleum, Congoleum-Nairn, Inc. Bathrooms—ceramic tile, U. S. Quarry Tile Co.

WALL COVERINGS
Kitchen—Formica and Masonite Presdwood. Bathrooms—tile tub alcove, U. S. Quarry Tile Co. Walls and ceiling—yellow pine veneer, stainless steel moldings, Pyramid Metals Co.

WOODWORK
All B&B yellow pine.

HARDWARE
Interior and exterior—Schlage Lock Co.

PAINTING
Interior: Paneling and floors—stain and wax. Trim and sash—lead and oil. Exterior: Walls and sash—lead and oil. All paint by Pittsburgh Paint Co.

ELECTRICAL INSTALLATION
Wiring system—flexible steel conduits. Switches—Hart & Hegeman.

KITCHEN EQUIPMENT
Stove—American Stove Co. Refrigerator—Norge Corp. Sink—Crane Co.

BATHROOM EQUIPMENT
All fixtures by Crane Co.

PLUMBING
Soil and vent pipes—cast iron. Water supply pipes—galvanized steel, National Tube Co.

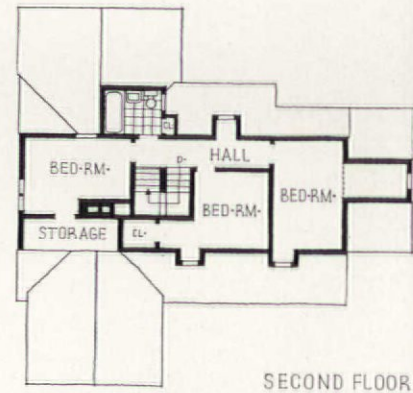
HEATING
Gas outlets only. Hot water heater and bathroom wall heaters, Crane Co.

35. HOUSE FOR ELLIOTT DE FORREST, SEATTLE, WASHINGTON

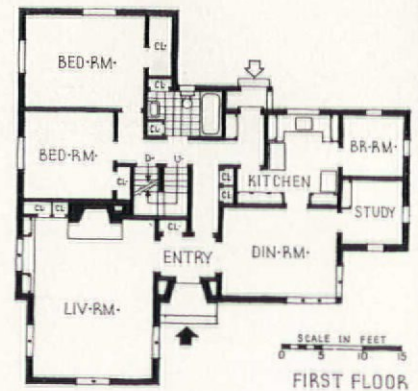
HOMES, INC., ARCHITECTS



Webster & Stevens Photos



SECOND FLOOR



FIRST FLOOR

An intelligent use of materials showing special ingenuity in the handling of brick details. The large window areas are pleasantly subordinated to the wall surfaces. The central portion of the plan shows corners and waste hall space, which are almost unavoidable in a rambling plan of this type. The small study adjoining the dining room, the separate service entrance, and the economical correlation of bathrooms are notable adjuncts of this residence. Cost: \$6,193.



KITCHEN

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—4 x 4 x 16 in. insulation tile, hollow core, 3/4 in. air space; saturated asphalt building paper, 1/2 in. Celotex; 2 x 4 in. studding; Celotex plaster base and 2 coat plaster. All framing lumber is Weyerhaeuser's 4-square.

ROOF: Wood shingles.

SHEET METAL WORK: Armco galvanized iron, American Rolling Mills Co.

WINDOWS: Casement sash, cedar sill frames. Glass—double strength, Pennvernon.

FLOORS: Living room, bedrooms and halls—oak. Kitchen and bathrooms—linoleum covered.

PAINTING: Interior—wall coverings, enamels and fillers used throughout, General Paint Corp. Exterior: Walls—cement paint. Roof—Cabot stain.

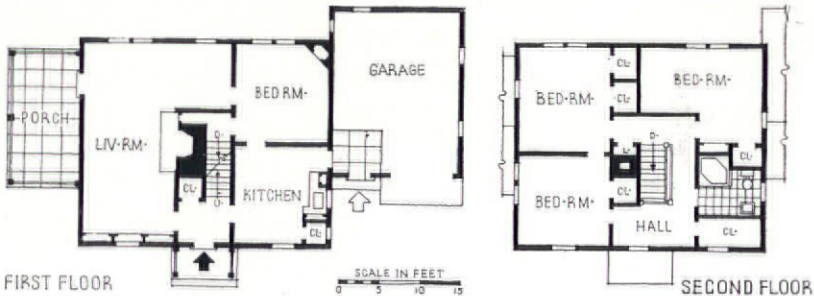
ELECTRICAL INSTALLATION: Wiring system—knob and tube. Switches—tumbler type. Fixtures—Lightolier and Chase Brass & Copper Co.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. **HEATING AND AIR CONDITIONING:** Partially air conditioned, fan and filters, Montag Stove & Furnace Works. Hot Water heater—electric.



Currier Photos

A contemporary development in the Early American style. The plan follows its prototypes in that it evolves about the heavy central chimney and the boxed-in staircase. The living room offers great possibilities as a general purpose room, and the side entrance correlated with the garage and adjacent work space is an original as well as useful feature. Cost: \$6,650. Cubage: 25,360 at 26 cents.



REAR ELEVATION

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—6 in. clapboards, Ponderosa pine, Sisalkraft paper, diagonal sheathing, 4 in. hemlock studs, 1/2 in. Celotex, 2 coats plaster, Atlantic Gypsum Co.
ROOF: Asphalt shingles, Ruberoid Co.
SHEET METAL WORK: Flashing—galvanized iron.
INSULATION: Outside walls—1/2 in. Celotex. Attic floor—4 in. Thermofill between joists.
WINDOWS: Sash—pine stock, double hung. Glass—quality B, Libbey-Owens-Ford Glass Co.
FLOORS: All rooms—25/32 in. oak, 2 1/2 in. wide.
WOODWORK: Trim—white pine, stock. Shelving and cabinets—Morgan Woodworking Co., Oshkosh, Wis.
ELECTRICAL INSTALLATION: Cable—BX. Switches—toggle. Fixtures—Chase Brass & Copper Co.
KITCHEN EQUIPMENT: Stove—Westinghouse Electric & Mfg. Co. Refrigerator—Coldspot, Sears Roebuck Co.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—wrought iron, A. M. Byers Co. Water supply pipes—brass.
HEATING: One pipe steam. Boiler and radiators—Arco, American Radiator Co.

37. HOUSE IN CROTON-ON-HUDSON, N. Y.

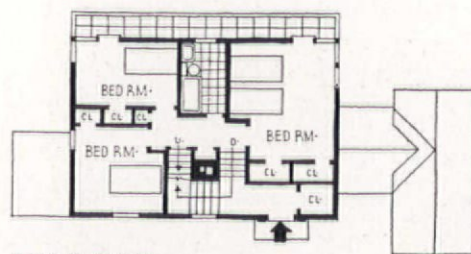


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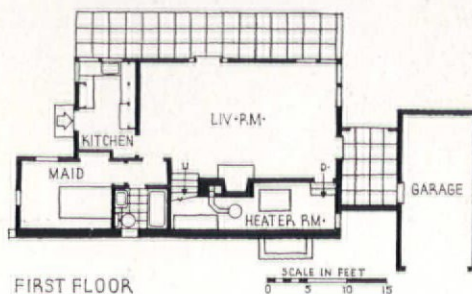
This, and the following residence, are two of a group of four erected upon a steeply rising slope. Each house presented a definite problem of accessibility which has been eminently well solved. The entrance is obtained in each case at an intermediate level in order to break up any long flight of steps. The living rooms are oriented to the back of the house, thus insuring privacy and correlation with the garden and terrace. The pilasters flanking the front entrance and the horizontal mullions in the windows are original notes. The color scheme consists of a soft and rather somber wall background set off by brilliant accents of color on front door and shutters. Cost: approximately \$10,000.



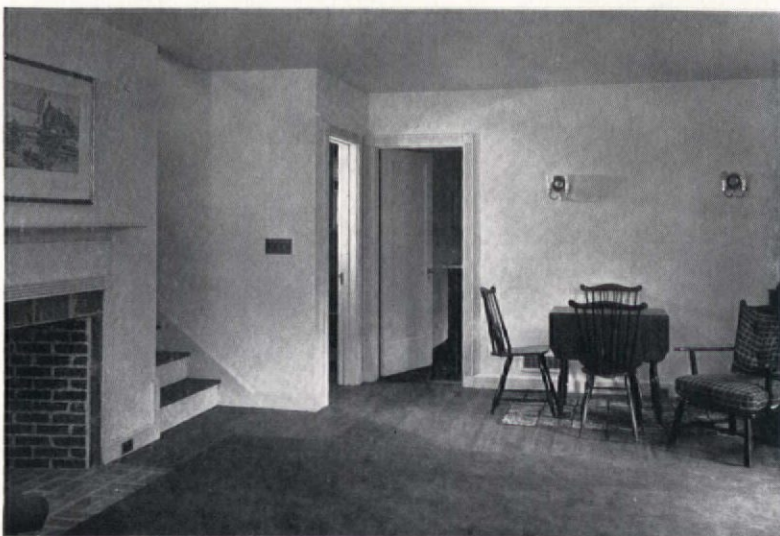
ENTRANCE



SECOND FLOOR



FIRST FLOOR



DINING ALCOVE



LIVING ROOM

CONSTRUCTION OUTLINE

FOUNDATIONS

Walls—concrete block and stone. Waterproofing—membrane against earth fill.

STRUCTURE

Exterior walls—frame, sheathing, paper, clapboards. Inside—metal lath and plaster.

ROOF

Wood rafters, pine sheathing, No. 1 Bangor black slate over heavy roofing felt.

SHEET METAL WORK

Flashing, gutters and leaders—copper.

INSULATION

Roof—4 in. rock wool.

WINDOWS

Sash—wood, casement and double hung with Unique balances. Glass—quality A, Libbey-Owens-Ford Glass Co.

FLOORS

Living room, bedrooms and halls—oak. Kitchen—linoleum. Bathroom—rubber tile.

WALL COVERINGS

Bedrooms and halls—wallpaper.

WOODWORK

Trim and cabinets—pine. Doors—single panel.

HARDWARE

Interior and exterior—brass, Sargent & Co.

KITCHEN EQUIPMENT

Stove and refrigerator—gas.

LAUNDRY EQUIPMENT

Laundry tubs, Standard Sanitary Mfg. Co.

PLUMBING

All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply—brass.

HEATING AND AIR CONDITIONING

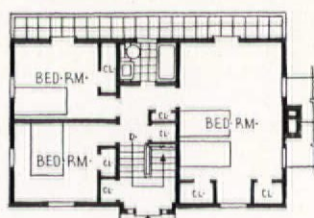
Warm air, filtering and humidifying, Fitzgibbons Boiler Co., Inc.

38. HOUSE IN CROTON-ON-HUDSON, NEW YORK

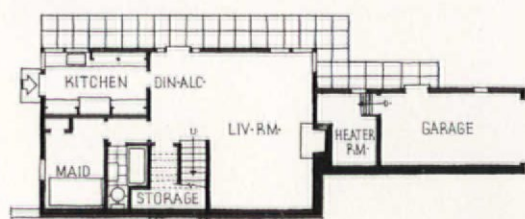


Imandt Photos

HARVEY STEVENSON AND EASTMAN STUDDS, ARCHITECTS



SECOND FLOOR



FIRST FLOOR

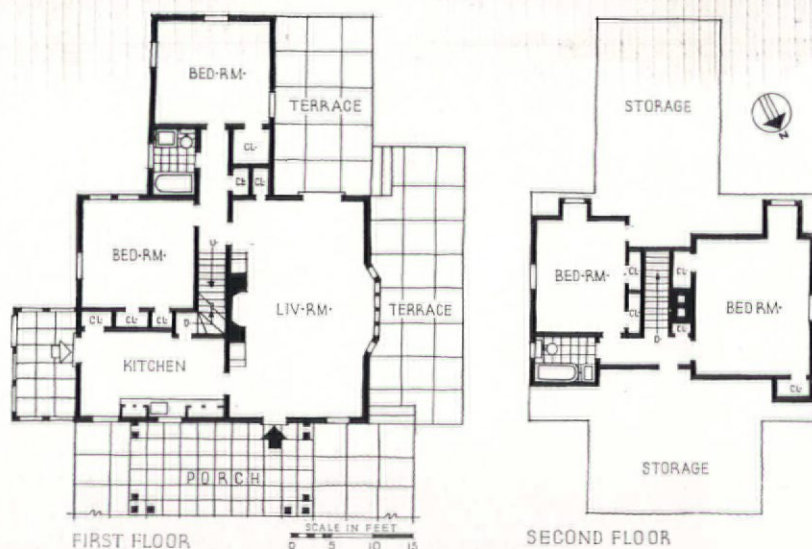
SCALE IN FEET
0 5 10 15

This house follows the same general scheme as the one on the preceding page. The construction outline is identical. The composition of the exterior is effectively simple and loses none of its intimate feeling by symmetry.



GARDEN ELEVATION

39. HOUSE FOR MRS. LEWIS MIDDLETON, CHESTER, N. J.



ALTON L. CRAFT, ARCHITECT

CONSTRUCTION OUTLINE

STRUCTURE: Sheathing and heavy roofing felt, 4 in. studs, 6 in. red cedar siding. Inside—3 coats plaster on Celotex lath.

ROOF: Cedar shingles on lath.

SHEET METAL WORK: Flashing and gutters—copper.

WOODWORK: Trim and doors—stock, white pine.

PAINTING: Interior: Walls—3 coats lead and oil. Ceilings—calcimine. Floors—Minwax stain. Exterior: Walls and sash—3 coats lead and oil.

ELECTRICAL INSTALLATION: Wiring system—3 wire BX. Switches—tumbler, General Electric Co. Fixtures—Lightolier Co.

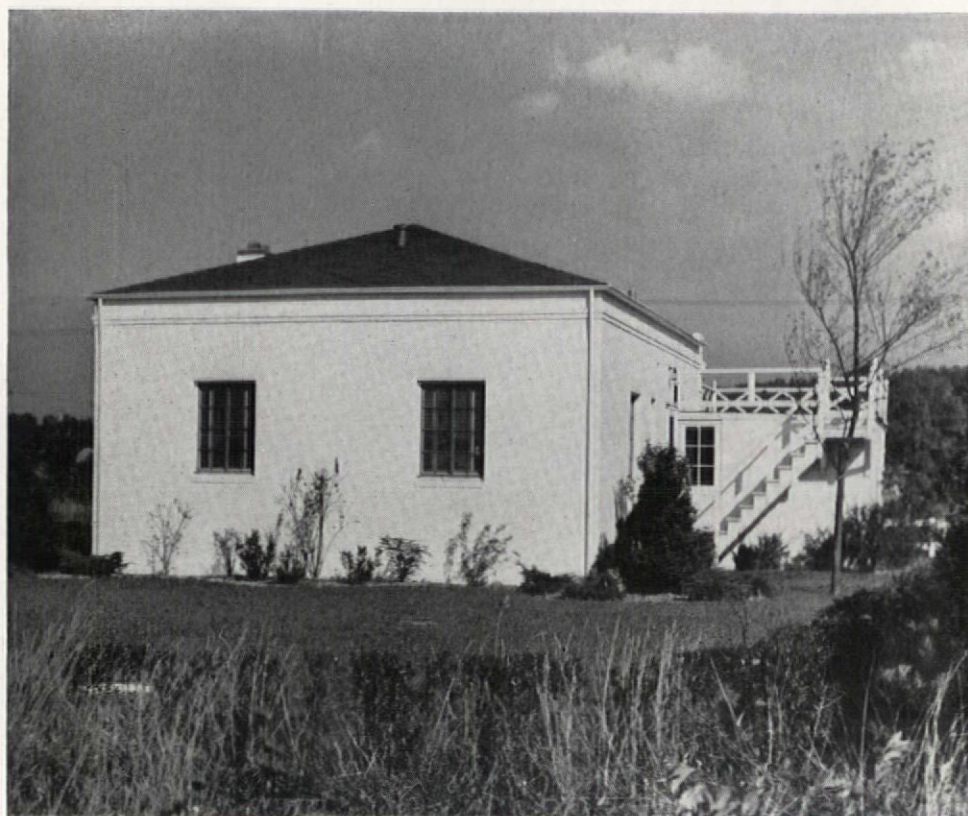
KITCHEN EQUIPMENT: Stove—General Electric. Refrigerator—Westinghouse Electric & Mfg. Co.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron.

HEATING AND AIR CONDITIONING: Warm air, filtering, humidifying; Holland Furnace, oil fired. Hot water heater, General Electric Co.

The profusion of porches and terraces apparent in this residence make it an ideal summer home. The living room and kitchen are so arranged that dining space is available either on the partially enclosed porch, or in one end of the living room. Stairs are ideally located to insure privacy for all bedrooms with a minimum of hall space. The exterior is simply designed and well proportioned, and the large porch has been made a feature of the elevation instead of being the usual minor appendage. Cost: \$9,500. Cubage: 30,000 at 32 cents.

40. HOUSE FOR ALFRED L. HART, WANTAGH, LONG ISLAND, N. Y.



John Beinert Photos



WALKER & GILLETTE, ARCHITECTS



CONSTRUCTION OUTLINE

STRUCTURE: Brick veneer on wood frame construction.

ROOF: Black slate. Deck—composition roof with slate laid in mastic.

INSULATION: Outside walls and attic floor—4 in. rock wool.

WINDOWS: Sash—metal casement. Glass—double thick. Screens—bronze.

FLOORS: All floors—oak, except kitchen which is linoleum covered and tile in bath.

PAINTING: Interior—3 coats lead and oil.

KITCHEN EQUIPMENT: Stove, refrigerator and dishwasher—electric, General Electric Co.

PLUMBING: Soil pipes—cast iron. Water supply pipe—brass.

HEATING AND AIR CONDITIONING: General Electric system including filtering, humidifying and cooling.

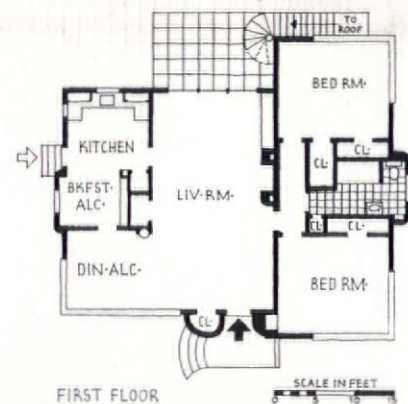
An extremely well correlated plan. The dining alcove is ideally situated, since it can be either a part of or entirely segregated from the living room. Among the unusual features of the residence is the use of the garage roof as a terrace accessible from the rear by a stairway. The air conditioning unit system includes filtering, humidifying, and cooling. The elevations, outside of the rather spotty blinds, are simple and tastefully designed with classical refinement. Cost: \$7,500. Cubage: 16,500 at 45½ cents.

41. HOUSE FOR D. BERRYHILL, SAN ANTONIO, TEXAS, ADAMS & ADAMS, ARCHITECTS



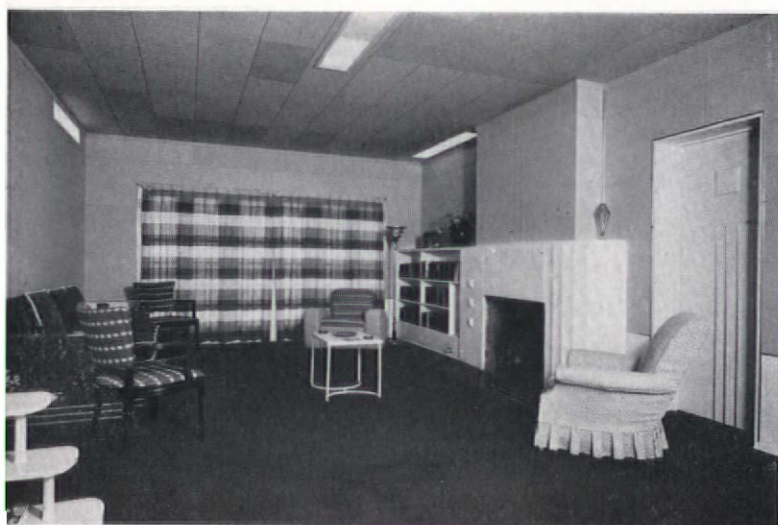
A. S. Masterson Photos

The plan of this stucco house combines living and dining rooms, and, in addition, a breakfast alcove. The placing of the large windows leaves uninterrupted wall spaces for furniture; the advantages of this type of planning are especially noticeable in the bedrooms. The roof of the house has been finished for use as a garden terrace, with access by means of an outside stair. Lighting fixtures are indirect or recessed. Mechanical equipment includes a cooling plant. Cost: \$6,741.



CONSTRUCTION OUTLINE

STRUCTURE: 2 x 4 in. studs with diagonal bracing, 15 lb. asphalt felt, lath and stucco outside; fiber board inside, Certain-teed Products Corp.
ROOF: Barrett specification built up tar and gravel on Certain-teed fiber board.
SHEET METAL WORK: Galvanized iron.
WINDOWS: Sash—Fenestra steel casement and screens, Detroit Steel Products Co. Glass—double strength, quality A.
FLOORS: Living room, bedrooms and halls—oak. Kitchen—linoleum. Bathrooms—tile.
KITCHEN EQUIPMENT: Stove—gas. Refrigerator—electric. Sink—2-compartment.
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—cast iron and galvanized steel. Water supply pipe—galvanized iron.
HEATING AND AIR CONDITIONING: Provision is made for future installation.

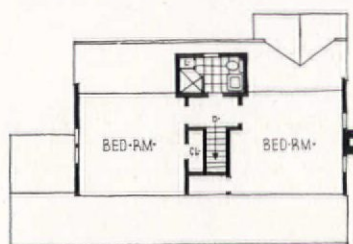


LIVING ROOM

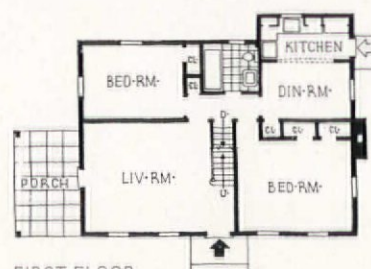
42-43. HOUSES IN HEWLETT POINT PARK, LONG ISLAND, N. Y.



Charles E. Knell Photos

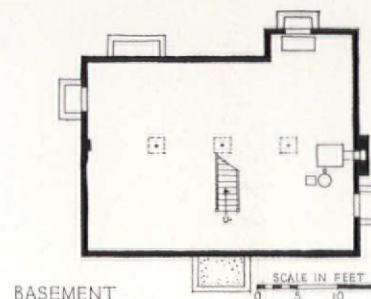


SECOND FLOOR



FIRST FLOOR

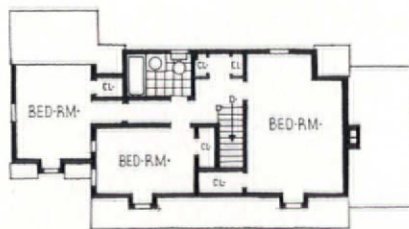
These two houses, having basically similar plans, are selected from various architect-designed homes, erected by a large realty company, follow similar general schemes, and are so arranged that expansion is available without detracting from the original charm. The Cape Cod and Dutch Colonial styles are prevalent, since they are quite economical and require for their only ornamentation a refined handling of entrance and cornice motives. The plan shows no entrance hall; however this is compensated by the proximity of the stair case, and ample closet space. The kitchen is ideally located and can be cross ventilated. There may be justifiable criticism in the tight circulation between dining and living rooms, which is further complicated by the surrounding chamber and baths area. Cost: \$5,200. Cubage: 24,200 at 22 cents.



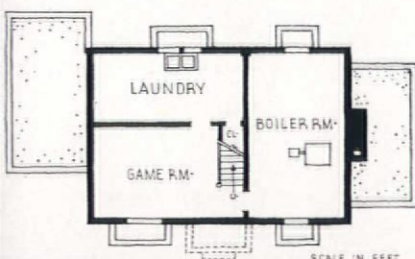
BASEMENT



FIRST FLOOR



SECOND FLOOR



BASEMENT

SCALE IN FEET
0 5 10 15

CONSTRUCTION OUTLINE

STRUCTURE: $\frac{7}{8}$ in. beveled siding, waterproof paper, $\frac{7}{8}$ in. sheathing, 2 x 4 in. wood studs, wood lath and plaster.

ROOF: Wood shingles and slate.

SHEET METAL WORK: Flashing, gutters and leaders—copper.

WINDOWS: Sash— $1\frac{3}{8}$ in. stock, double hung, wood, weatherstripped. Glass—double strength.

FLOORS: Living room, bedrooms and halls— $\frac{7}{8}$ in. oak. Kitchen—linoleum. Bathrooms—tile.

WALL COVERINGS: All rooms—wallpaper, Richard E. Thibaut, Inc. Bathrooms—tile.

WOODWORK: Trim, cabinets and doors—white pine. **PAINTING:** Interior—2 coats lead and oil, 1 coat enamel. Floors—shellacked. Exterior—3 coats lead and oil.

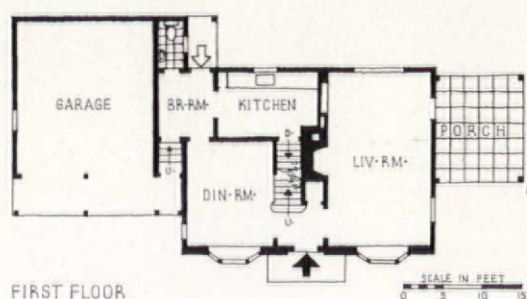
ELECTRICAL INSTALLATION: Wiring system—BX flexible cable. Switches—tumbler, Harvey Hubbell, Inc. **KITCHEN EQUIPMENT:** Stove—gas. Refrigerator—electric.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipe—extra heavy cast iron. Water supply—brass.

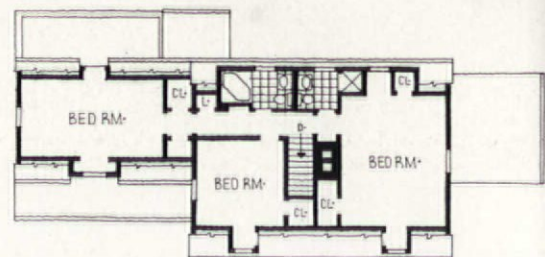
HEATING: Steam. Boiler—oil fired; radiators—American Radiator Co. Valves—Jenkins Bros., Inc.



Gustav Anderson Photos



FIRST FLOOR



SECOND FLOOR

SCALE IN FEET
0 5 10 15

A substantially constructed house whose main interest lies in the original treatment of the exterior. Ashlar and wood have been combined in an extremely effective manner to give this residence an appearance which is not monotonous. By setting the garage in back of the main plane of the elevation adequate protection has been secured by means of a wide marquise, and in the rear, additional space secured has been planned as service porch, breakfast pantry, and lavatory. The two baths designed in conjunction with the upstairs bedrooms are commendable features of the second floor plan. Cost: approximately \$10,000. Cubage: 26,600 at 39 cents.

CONSTRUCTION OUTLINE

STRUCTURE: 6 in. stone veneer, 18 in. red cedar shingles or vertical boarding and battens over heavy building paper, studs, rock wool insulation, wood lath and plaster and wall paper.

ROOF: Blue-black Pennsylvania slate.

SHEET METAL WORK: 16 oz. copper.

INSULATION: Outside walls—2 in. rock wool. Attic floor—4 in. rock wool.

WINDOWS: Sash—pine, double hung, weatherstripped. Glass—quality B.

FLOORS: All rooms—oak, except linoleum in kitchen and tile in bath.

PAINTING: Interior: Floors—1 coat filler, 1 shellac, 1 wax. Trim and sash—3 coats lead and oil, mixed on job. Exterior: Walls and sash—3 coats lead and oil.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—tumbler.

KITCHEN EQUIPMENT: Stove—Magic Chef, American Stove Co. Refrigerator—Norge Corp. Washing machine and drier—Graybar Electric.

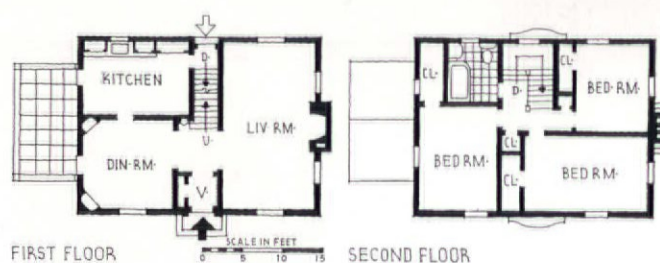
PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil pipes—cast iron. Water supply—Brass, Chase Brass & Copper Co.

HEATING: Steam. Boiler—Fitzgibbon oil fired.

45. HOUSE FOR J. C. KUHLMAN, MINNEAPOLIS, MINNESOTA



JULIAN FARNAM, ARCHITECT



A wood Colonial house, typical in its essentials of the two-story, three-bedroom residence in the moderate price class. The plan, with the stairway separating the living room from the dining room and kitchen, is one of the few possible arrangements of these elements which satisfactorily meets the requirements. The use of arched openings instead of doors between the main first-floor rooms increases the spaciousness of the interior. A porch is well placed for use as an outdoor dining space, and cuts off a minimum of light from either dining room or kitchen. The second floor is compact, with only one bathroom, and with ample wall space for furniture in all three bedrooms. The stair hall, being placed at the rear, has ample light, and provides for a small service vestibule off the kitchen. Cost, including a detached one-car garage: \$6,000, at about 30 cents.

CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—10 in. siding, 15 lb. felt, shiplap on 2 x 4 in. studs, 16 in. o. c. ½ in. balsam wool between studs, plaster on wood lath.

ROOF: 16 in. stained cedar shingles over 15 lb. tar felt.

SHEET METAL WORK: Flashing, gutters, leaders—galvanized iron.

INSULATION: Outside walls and attic floor—½ in. balsam wool.

WINDOWS: Sash—double hung, wood. Glass—double strength, quality A.

FLOORS: Living room, bedrooms, and halls—oak. Kitchen—linoleum, Bathrooms—tile.

PAINTING: Interior: Kitchen and bath—oil paint, balance is unfinished plaster. Floor—varnish and wax. Trim and sash—4 coats enamel.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle.

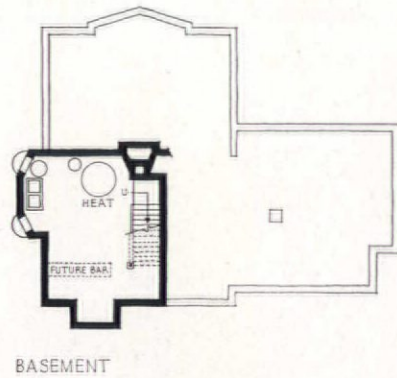
KITCHEN EQUIPMENT: Stove and refrigerator—electric. Sink—flat rim, enameled iron.

HEATING: Warm air.

46. HOUSE FOR EVAN C. SCHWEMER, FOX POINT, WIS.



The large window area is successfully handled in conjunction with a style inspired from the classic. The plan seems rather grand and axial in composition, but since an increase in the scale of the living room and the dining room is obtained through this procedure, the end may justify the means. The garage separated from the main structure enhances the rambling and spacious feeling of the whole design. Cost: \$8,604. Cubage: 24,620 at 34 $\frac{3}{4}$ cents.



ENTRANCE



LIVING ROOM

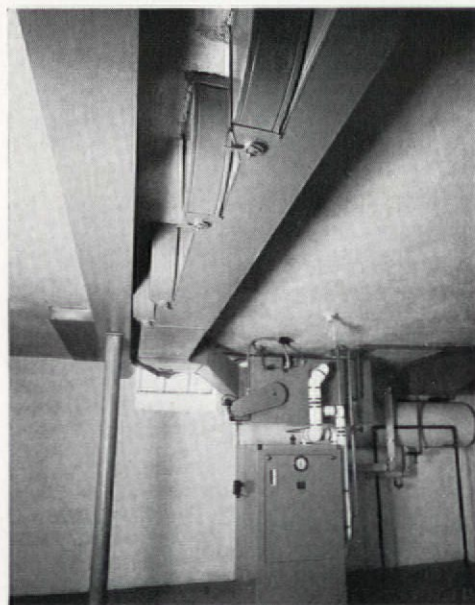
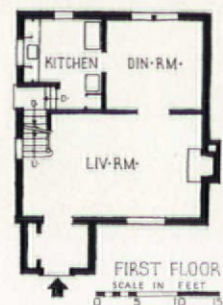
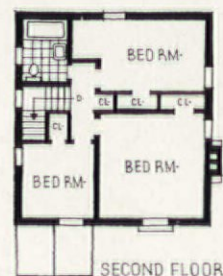
CONSTRUCTION OUTLINE

- FOUNDATION**
Walls—concrete block. Cellar floor—reinforced concrete on cinder.
- STRUCTURE**
Exterior walls—2 x 4 in. studs, 1 x 6 in. T. & G., 6 in. hemlock sheathing and 15 lb. paper, 1 x 6 in. special California red wood siding soaked in oil. Inside—U. S. Gypsum Co. sheet rock and plaster. First floor construction—2 x 12 in. red fir. Attic floor—2 x 8 in. red fir.
- ROOF**
Covered with 100 per cent edge grain, cedar shingle. Deck covered with built up roofing.
- SHEET METAL WORK**
Flashing and gutters—galvanized iron.
- INSULATION**
Outside walls and attic floor—rock wool, 4 in., U. S. Gypsum Co. Weatherstripping on doors—Chamberlin Weatherstripping Co.
- WINDOWS**
Sash—double hung, wood, Anderson Co. Storm sash throughout except in large bay which is Thermopane double thick, American Window Glass Co. Screens—copper in wood frame.
- FLOORS**
All rooms 1 x 5 in. fir, T. & G.; kitchen and bathroom—linoleum covered.
- WALL COVERINGS**
Living room, bedrooms and halls—wallpaper.
- WOODWORK**
All interior trim and woodwork—white pine. Garage doors—Majestic Overhead Door Co.
- HARDWARE**
Interior and exterior—dull nickel finish, Yale & Towne.
- PAINTING**
Interior: Walls, ceilings, trim and sash—except for wallpaper all walls enameled 3 coats, Frank Dow Paint Co. Exterior: Walls and sash—3 coats lead and oil. Roof—stained creosote.
- ELECTRICAL INSTALLATION**
Switches—Cutler Hammer, Inc. Fixtures—Moe Brothers Co., Milwaukee, Wis.
- KITCHEN EQUIPMENT**
Stove and refrigerator—electric. Sink—enameled iron, two compartment, Kohler Co.
- PLUMBING**
All fixtures by Kohler Co. Soil and vent pipes—cast and galvanized iron. Water supply—galvanized iron. Pump for well, softener, etc., all by Heil Co., Milwaukee, Wis.
- HEATING AND AIR CONDITIONING**
Air conditioned with well water. Indirect system with steel boiler, oil fired. Filters and air conditioner, Synchronic Air Conditioning Corp. of Milwaukee. Hot water heater—coil in boiler.
- SPECIAL EQUIPMENT**
Kermentor incinerator, brick built, fired in basement.

47. HOUSE IN DETROIT, MICH. J. IVAN DISE, ARCHITECT



This residence, one of several erected by the Kelvinator corporation to publicize the Kelvinator "Package" which includes year-round air conditioning with gas or oil burning boiler, range, and electric refrigeration, follows the usual square plan, and is further simplified by the location of the entrance hall and coat closet in a wing outside of the main bearing wall lines. The economy of installation and operation of the equipment, and its intimate relationship to the design itself is noteworthy. Cost: \$6,000. Cubage: 18,905 at 31¾ cents.



AIR CONDITIONER

CONSTRUCTION OUTLINE

STRUCTURE: Yellow pine frame, sheathing, roofing felt; inside—rock lath and plaster.
ROOF: Stained wood shingles on sheathing.
SHEET METAL WORK: Galvanized iron.
INSULATION: Outside walls and attic floor—4 in. rock wool.
WINDOWS: Sash—wood, double hung, weather-stripped. Glass—double strength, quality A.
FLOORS: All rooms—2¼ in. select oak except linoleum covered pine in kitchen and tile bath.
WOODWORK: Trim—clear yellow pine. Doors—1½ in. pine, 2-panel.
PAINTING: Interior—2 coats flat paint. Exterior—3 coats lead and oil.
ELECTRICAL INSTALLATION: Wiring system—neutral concentric cable. Switches—toggle, Bakelite plates.
KITCHEN EQUIPMENT: Stove and refrigerator—electric, Kelvinator Corp.
PLUMBING: Standard fixtures. Soil pipes—cast iron. Water supply pipe—brass.
HEATING AND AIR CONDITIONING: Year around air conditioner with oil boiler-burner unit, condenser and comfort damper. All by Kelvinator Corp.

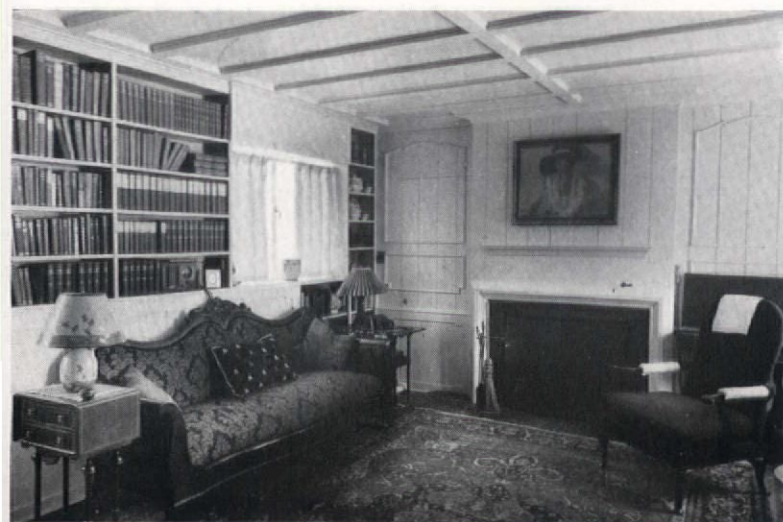
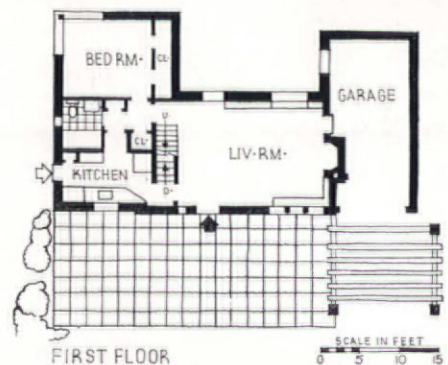
48. HOUSE FOR JOHN LA GATTA, PORT WASHINGTON, LONG ISLAND, N. Y.



Murray M. Peters Photos

THEODORE WHITEHEAD DAVIS, ARCHITECT

This house boasts a great deal of charm and personality. The stiffness of continuous straight lines has been eliminated by using a wavy shingle pattern and spill joints between brick courses. The rather whimsical dormer directly above the front entrance is a matter of personal taste, and the plan with its one bedroom and absence of dining room amplifies the fact that this is a residence especially designed for the owner. Cost: \$5,500. Cubage: 18,750 at 29 cents.



LIVING ROOM

CONSTRUCTION OUTLINE

STRUCTURE: Brick veneer, air space, studding and sheathing. Interior finish— $\frac{3}{8}$ in. plywood and sheet rock.

SHEET METAL WORK: Flashing—14 oz. sheet copper.

INSULATION: Roof— $\frac{1}{2}$ in. balsam wool.

WINDOWS: Fenestra steel casement with screens.

FLOORS: All rooms red oak strips; kitchen and bath—linoleum covered.

WALL COVERINGS: All rooms are wallpapered, except kitchen and bath which are painted.

PAINTING: Exterior: Walls—whitewash on brick. Roof—shingles, 1 coat unrefined creosote, 1 coat red barn paint.

ELECTRIC INSTALLATION: Wiring system—3 wire BX cable. Switches—tumbler.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent pipes—cast iron. Water supply pipe—brass.

HEATING: Warm air. Boiler—gas fired, The Bryant Heater Co. Hot water heater—Ruud Co.

49. HOUSE FOR EDWARD PICKARD, KENT, CONNECTICUT



George H. Van Anda Photos

Both the exterior and the interior of this house depict admirably the versatility of wood as a building material. The horizontal shingle lines are pleasantly balanced by the vertical lap-siding, and the interior paneling gives a substantially decorative, though somber, background to the furnishings. The large second floor porch and the library bay window are not only instrumental in breaking up the facade, but are both highly commendable additions to the function of the house. Details have been carefully studied, and the whole design shows great skill in adapting stylistic precedent. Cost: \$7,000.

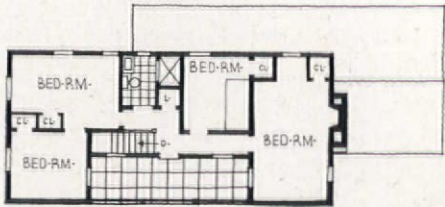




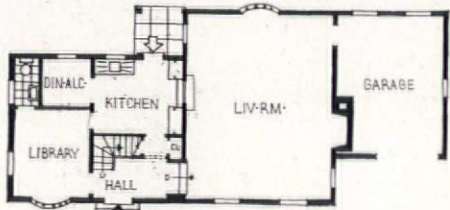
LIVING ROOM



HALL



SECOND FLOOR



FIRST FLOOR

SCALE IN FEET
0 5 10 15

CONSTRUCTION OUTLINE

FOUNDATION

Walls—concrete, continuous.

STRUCTURE

Exterior walls—cedar shingle, building paper, diagonal sheathing, 4 in. studs, 1 in. insulating lath, gypsum plaster. First floor—6 in. cinders, 4 in. concrete, 2 x 3 sleepers, sub-floor, paper and finished floor oak and pine. Second and attic floor—wood.

ROOF

Construction—wood frame covered with cedar shingle.

SHEET METAL WORK

Flashing, gutters and leaders—copper.

INSULATION

Outside walls and attic floor—1 in. insulating lath. Weatherstripping—Silentite, Curtis Co.

WINDOWS

Sash—double hung, spring balance, Curtis Co. Glass—double strength, quality A.

STAIRS

Main stair—closed stringer type. Treads—maple. Risers and stringers—pine.

FLOORS

Living room—bluestone flagging, random rectangular. Bedrooms and halls—linoleum and wood. Kitchen and bathrooms—linoleum. Porches—canvas deck set in white lead.

WALL COVERINGS

Living room—natural redwood sheathing; balance of rooms—wallpaper.

WOODWORK

Trim, shelving and cabinets—pine. Doors—Ponderosa pine, 1 3/8 in., Curtis Companies, Inc.

HARDWARE

Interior and exterior—wrought iron, handmade by local craftsman.

PAINTING

Interior trim and sash—lead and oil. Exterior walls and roof—stained.

ELECTRICAL INSTALLATION

Wiring system—BX. Fixtures—handmade by local craftsman.

KITCHEN EQUIPMENT

Stove—electric.

PLUMBING

Soil and vent pipes—cast and galvanized iron. Water supply—galvanized iron.

HEATING

Provided for, not yet installed.

50. HOUSE FOR DR. JEROME J. YOUNGFLEISH, PLYMOUTH, PA.

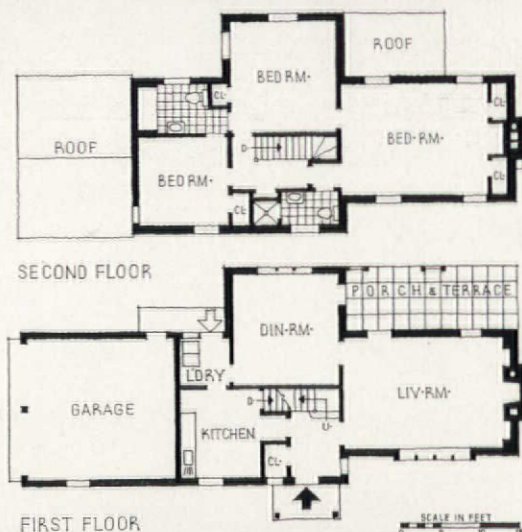


J. LINERD CONARROE, ARCHITECT

A precedent may be found in this house, based upon New England prototypes, which has been adapted to fill such contemporary requirements as the two-car garage and the separate laundry unit. The interiors show evidence of good taste and refinement in their calm and well proportioned handling of cabinet work and trim. Cost: \$9,700. Cubage: 27,556 at 35 cents.



LIVING ROOM



CONSTRUCTION OUTLINE

STRUCTURE: Exterior walls—common brick painted with Bondex, furred on inside, insulation lath and plaster.

ROOF: Rafters, 2 x 6 in., Royal cedar shingles.

SHEET METAL WORK: 16 oz. copper.

WINDOWS: Sash—double hung, some casements. Glass—double strength, quality A.

FLOORS: Living room and halls—random width oak. Bedrooms—2 1/4 in. oak. Kitchen—pine, linoleum covered. Bathrooms—tile.

ELECTRICAL INSTALLATION: Wiring system—BX. Switches—toggle type.

KITCHEN EQUIPMENT: Stove—Hot Point electric, Edison General Electric Appliance Co., Inc.

PLUMBING: All fixtures by Standard Sanitary Mfg. Co. Soil and vent—cast iron. Water supply pipe—Chase stream line copper tubing.

HEATING: Hot water, Boiler—oil fired.

BUILDING MONEY

**A monthly section devoted to reporting the news and activities
of building finance, real estate, management and construction**

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Man of the Month HAROLD T. DONALDSON (see Page 480)

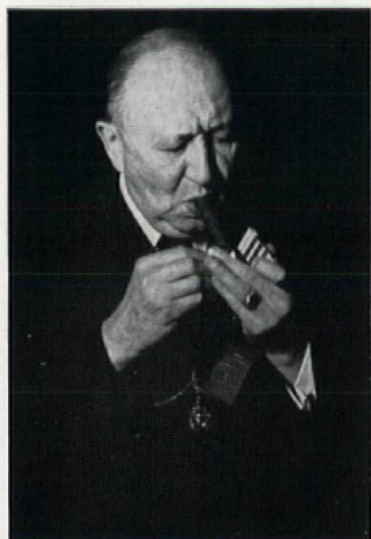
Bernard Hoffmann



First thing, 10 A.M. Monday morning, Presiding Officer John C. Hall opened the drive which pushed through Open Meeting the keynoting blast against Government intervention and supervision in Building & Loan affairs.



Executive Vice President is the official title of muscular, tactful Morton Bodfish, since 1930 in charge of League affairs at the Chicago office. More accurate is the designation "Lobbyist." Here and on the next page observe Mr. Bodfish in action.



Secretary Treasurer H. F. Celarius is one of the League's two living founders, still its prime statistician. He is 73.



Instruction included a lobby-full of building material exhibits and accessories (above), a display of promotion plans. Biggest attraction: the integrated bidet (center). Amusement centered in the rooms of the Beverly, the Waldorf, the Barclay Hotels, included bending bottle caps single-handed.



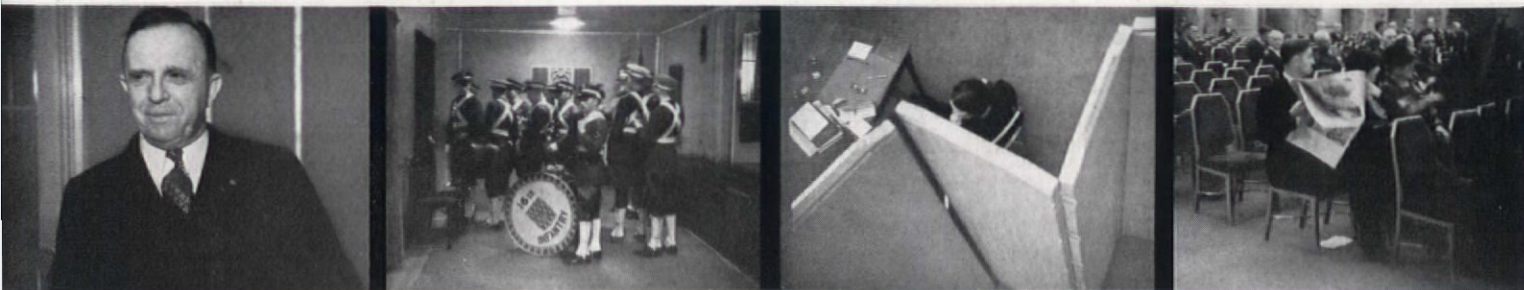
The Federal Government was in disfavor, spoke as softly as FHA's Appraiser Frederick Babcock, here displaying his first photographed smile.



Elections singled out Clarence T. Rice of Kansas City, arch-conservative onetime high school principal, as 1937's Second Vice President, and Harold T. Donaldson of Lansing, Mich. as 1937 President.



All photos, Bernard Hoffman



On Wednesday morning occurred the formal opening of the General Session, President LeGrand Pellet (above) presiding for the last time as the Color Guard, after a decorous wait in the corridor, presented the colors.

Inconspicuous behind a screen during the whole session sat Secretary Louise Johnson, down from the Washington office to keep tabs for Morton Bodfish. Right: Open Meeting, early morning.



Having remembered your name without hesitation, he has tickled you with an anecdote (not a joke), sipped one tenth of a drink, and departed with inconspicuous haste, leaving you flattered and impressed.

Bodfish amanuensis is pert, hardworking Josephine Ewalt who handles the Press with humor and dispatch, at the Convention doled out cards signed by Morton Bodfish which were "Good For One Drink" (extreme right).

BUILDING AND LOAN'S 44th

The "Billion Dollar Special" steamed the vanguard of the 44th Convention of the United States Building & Loan League into Manhattan on Sunday, October 11. Thereafter for seven days and seven nights 1,721 delegates from 48 States met, talked, and roistered mildly in and around the lush Waldorf-Astoria Hotel. Sentiment was duly honored in the pledge to the flag, the emphasis on the role of the League as the safeguard of America, the presentation of the Cellarius portrait to the League of Living Founders, the sonorous reading of the necrology. Tradition also decreed a five-minute speech contest, a Southwestern Group dinner, a dancing contest for a cup. The Social Room on the fourth floor was little used, and none protested the prompt closing of its bar at 7 every evening. There was a trip to West Point, excursions to Radio City, to night clubs, to Wall Street. Conversely, the Open Meetings never managed to fill the Convention Hall. Harold T. Donaldson, new president, presided long enough to reveal himself an able parliamentarian, a persuasive speaker. Guest speakers of honor were Chairman Allie Freed of the Committee for Economic Recovery, and Chairman John Fahey of the Home Loan Bank Board. The Convention motto, engraved on each delegate's badge: "America's Safeguard—American Homes." For further Convention notes, see p. 4.



Heir Apparent to the 1938 Presidency is newly elected first Vice President Edward C. Baltz of Washington, D. C. In small, observe Vice President Baltz peering informally into a suitcase.



RISK RATING IN PRACTICE

shows how the appraisal yardstick attains national application and how subdivision standards will be forced up.

FOURTEEN months ago, to the accompaniment of measured plaudits from the real estate fraternity, the FHA made public a semi-science, evolved by FHAppraiser Frederick M. Babcock and called the risk rating of mortgages. Devised to judge the comparative value of different mortgages, it was obviously significant at that time to all Building, because it afforded a single, country-wide appraisal standard, put a premium on architectural supervision, and set minimum standards of performance in construction and equipment. Not so obvious, but even more important, was its potential significance to U. S. housing of the future, in that its technique of grading mortgages placed a new premium on quality which would eventually force every developer to up his standards.

The interested were chary of enthusiasm, preferring to reserve full judgment until theory should become practice. Last month the FHA released to THE ARCHITECTURAL FORUM details of the actual performance of risk rating, which had been revamped but little by going through the fire of field application.*

As originally outlined, the system of risk rating properties implied an over-all risk of which the five components were: the property, the neighborhood, the relation of the property to the neighborhood, the borrower, and the mortgage pattern. Each of these divisions was covered in a separate grid. Scores having been previously assigned, an entry could be checked for each factor in the five major components. Actual application of the theory has demonstrated that the third element (relation of property to neighborhood) is not necessary, and further changes have been instituted in the wording of the factors.

The basic principle, however, is unchanged. The rating on property is done by the FHA architectural inspector, that on neighborhood by a staff or fee valuator, those on character of borrower and mortgage pattern by the mortgage risk examiner. All the grids are thereupon sent to the Chief Underwriter, who automatically turns down insurance of the mortgage if one or more of the individual risk features is marked "Reject."

The significance of this system of rating can be readily appreciated by a consideration of what is and will go on happening to the habits of the average speculative

builder. When Subdivider Smith gets a loan from Banker Jones for his first block of houses, and gets on them a rating of only 60 per cent from the FHA, Banker Jones is going to work hard to see that, when he loans to Subdivider Smith again, the second block of houses is going to get the care commensurate with a rating of 85 or 90 per cent. Thus are the money bags of the U. S. supplied a lever toward better housing, since those money bags may conceivably wish to sell the mortgage to the secondary field.

Further, as a look at the specimen grid shows, a high premium is put on architectural supervision, again insuring an improved standard of housing. Thus, in a typical Midwestern office, the number of applications submitted with plans executed by recognized architects eighteen months ago was but 10 per cent. At present they constitute 43 per cent of the total, and this percentage is steadily mounting. And, in the FHA Underwriting Manual, minimum standards of construction and equipment have been set up.

The two houses chosen for this illustration of risk rating in practice are above the average. They are typical of the better homes in the \$4,000 to \$8,000 price range, are houses in which the typical home-builder might well be interested. The larger, which received a rating of 87 per cent, is superior in many respects to the average property now being built for \$8,000. The smaller, which received a rating of 72 per cent, is only slightly better than the average in its price class.

On the next two pages are the houses, with risk rating applied to them in one of the four major aspects: Physical Security, renamed from Property. Under Property, as the system was originally cast, were included general layout, design of property, suitability to climate, livability, light and air, mechanical equipment, accessory, special equipment, structural soundness, resistance to elements and resistance to use. These subheadings have been condensed and recast with an eye to elimination of mutual inclusion. At present the subheadings are: structural soundness, resistance to elements, resistance to use, livability and functional plan, mechanical and convenience equipment, natural light and ventilation, and architectural attractiveness. The last subheading, which ordinarily would allow for too much personal opinion, under the system carries the connotation rather of simplicity, conformity, and sales appeal than of excellence of design in an architectural competition sense.

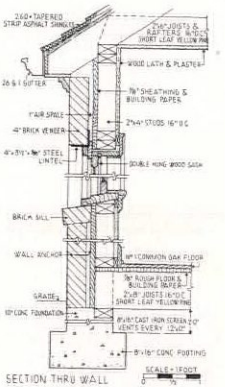
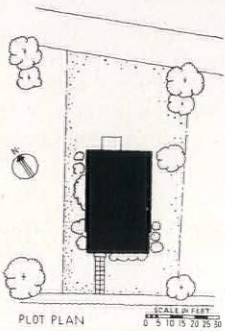
These seven features are analyzed from several different points of view. The first three features are studied in terms of durability, the next three in terms of function, the last in terms of lasting appeal. The first three features give a reasonable basis for predicting the plausible remaining physical life of the building improvements. Insofar as building mortality is independent of environment, the probabilities with respect to continuing physical life or level of maintenance costs are reflected by the ratings ascribed to the first three features. The fourth, fifth, and sixth features are significant indices to the property's attractiveness for sale or rent, and when considered in relation to the location, they indicate both accrued obsolescence and the probability of a rapid future decline in value as a result of future obsolescence. Further, the seventh feature, architectural attractiveness, affects the chances of future sale or future rent to people of reasonable taste.

That jerry-building is rendered impractical under risk rating is obvious, for structural soundness is rewarded with a maximum of 25 per cent, or $\frac{1}{4}$ of the house's total rating under Physical Security. The importance of the architect under the plan is likewise apparent: as much as 45 per cent goes for his work on functional plan and architectural attractiveness. It might be submitted as a fault in the plan that the intelligent home owner would rather have a house which rated high on the basis of natural light and ventilation (maximum: 5 per cent), than one which somebody else thought was architecturally attractive (maximum: 20 per cent). However, whereas the category of architectural attractiveness leaves some opportunity for gradation, either there is or there is not natural light and ventilation. The latter category yields the maximum of only five, but a rating of zero rejects the mortgage as fast as would a zero for architectural attractiveness.

It is essential to point out that the total rating of Physical Security of the smaller house is not lower than the total rating ascribed to the larger because it is smaller and less expensive. The ascribed ratings indicate that in the case of the smaller two of the three major individual features, structural soundness and architectural attractiveness, received the lowest ratings. However, a house in this lower cost range, having a condensed volume, could be so designed and constructed as to warrant higher ratings for each of these two features, thereby resulting in a higher total rating.

On the next two pages is shown the technique of risk rating in practice. As aids in following the line of thought, outside wall section, plot plan, floor plans, perspective, and construction outline accompany the critical remarks by FHAppraiser Babcock on the two houses chosen for illustration.

*Let those who would study the theory of the risk rating of mortgages more exhaustively turn to the September, 1935 issue of THE ARCHITECTURAL FORUM, pp. 212-214, for story of conception, exposition, interpretation.



CONSTRUCTION OUTLINE

WOODWORK: Exterior doors—1¾ in. yellow pine stock. Exterior trim, windows, and frames—yellow pine, calked. Doors—1¾ in. fir, 2-panel stock.

INTERIOR PARTITIONS: 2 x 4 in. studs, 16 in. o.c., wood lath and 3 coats smooth plaster.

BATH: Floor and sanitary base—¾ in. ceramic tile. Wainscot—Keene cement on metal lath and Portland cement base. Walls—wood lath, 3 coats smooth plaster and 3 coats enamel.

KITCHEN: Floor—inlaid linoleum, grade B, over B & B pine floor. Walls and ceiling—wood lath, 3 coats smooth plaster, and 3 coats enamel. Stock cabinets.

PAINTING AND DECORATING: Interior woodwork—2 coats enamel. Walls and ceilings—papered. Exterior woodwork—3 coats lead and oil. Floors—fill, 2 coats shellac and wax.

PLUMBING: Hot and cold water pipes—galvanized iron. Drain and soil pipes—extra heavy cast iron. Tub—double-shell recess, enamel iron wall lavatory. syphon action closet. Sink—double drainboard, roll rim; single cement laundry tray. Light chromium fixture trimmings. Tank—30-gallon galvanized iron with gas coil heater cross-connected to boiler.

HEATING: One-pipe steam, hand-fired cast-iron coal boiler, exposed cast-iron radiators.

ELECTRICAL WIRING: BX cable, medium grade panel boards.

SHEET METAL: Gutters, downspouts and flashing—26-gauge galvanized iron.

PHYSICAL SECURITY FEATURES		Reject	1	2	3	4	5	Rating
Durability	Structural Soundness		5	10	15	20	25	15
	Resistance to Elements		2	4	6	8	10	8
	Resistance to Use		1	2	3	4	5	4
Function	Livability and Functional Plan		5	10	15	20	25	20
	Mechanical and Convenience Equipment		2	4	6	8	10	8
	Natural Light and Ventilation		1	2	3	4	5	5
Architectural Attractiveness			4	8	12	16	20	12
TOTAL RATING OF PHYSICAL SECURITY								72%

STRUCTURAL SOUNDNESS. Although some of the materials entering into the structural fabric of this house are of better grade than those generally found in the same price range, a weight of fifteen is ascribed, principally because of the workmanship and grade of framing lumber used. A higher rating would be warranted if the structural members in tension were of long-leaf yellow pine of equal quality instead of short-leaf yellow pine, or if the sizes of these members were increased to compensate adequately for the difference in strength. The rating would also be favorably influenced had the methods of assembly been improved. For example, it is found that jack studs have been spliced and that in the installation of mechanical equipment, certain vital structural members have been severely carved by the proverbial "wood butchers."

RESISTANCE TO ELEMENTS. Considering the climatic rigors of the section of the country in which the property is located, it is found that the structure offers better than average resistance to elements but not in a sufficient degree to warrant a top rating. Therefore a weight of eight is assigned. Some of the factors which preclude this feature having a higher rating are: the presence of a composition roof carrying a guarantee of approximately fifteen years; the use of comparatively light-gauge galvanized iron for all sheet metal work, including flashing; and the absence of weatherstripping.

RESISTANCE TO USE. This feature is ascribed a weight of four, after examining the resistibility of all wearing surfaces to constant wear and tear under ordinary maintenance. While it is found that the various portions of the structure considered under this feature are above average, both as to base and finish, it is felt that a top rating is not justified because of the following: quality of hardware only fair, wood lath used as a plaster base; two-panel, 1¾ in. interior doors; and Keene's cement wainscoting in bathroom.

LIVABILITY AND FUNCTIONAL PLAN. Considering the floor area available and the cost of this structure, it is found that the planning results in a somewhat higher degree of functional efficiency than is usual in competitive properties. Therefore this feature is given a weight of twenty. The bedrooms and bath are fairly well separated from the living room; fairly ample storage accommodations have been provided; rooms have been arranged in logical sequence; and, for the type of family likely to occupy the property, a degree of livability exists which is better than average. Although there is no garage or accessory building on the property, the rating of this feature is not affected, for the size and location of available area on the plot make possible the erection of such a building in the future.

MECHANICAL AND CONVENIENCE EQUIPMENT. The plumbing fixtures, roughing-in, and trimmings are only average. The hot and cold water supply is galvanized iron pipe subject to incrustation on account of the impurities in the water. The heating plant and its installation are decidedly above the average usually found in this class of property. BX cable is used for the electric wiring; the panel boards are of very light construction. Taking these facts into consideration, the architectural inspector ascribes a weight of eight.

NATURAL LIGHT AND VENTILATION. A weight of five is assigned, for the orientation of the building upon the site takes full advantage of prevailing breezes in this section of the country. Both bedrooms, the living room, and the kitchen have cross ventilation, and the ratio of glass area to floor area assures ample light and ventilation under ordinary circumstances. Furthermore, the house is located in the center of the plot well away from adjoining buildings.

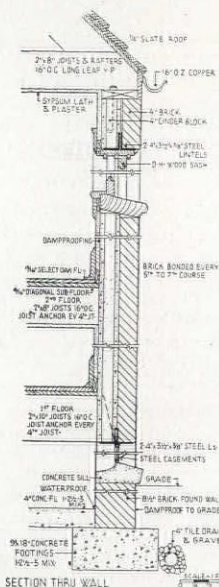
ARCHITECTURAL ATTRACTIVENESS. After viewing the property in its entirety and considering the general impression created, it is felt that this feature is not above the average. Therefore this feature was weighted twelve. One of the contributing reasons for this rating is the uncertainty at this time as to whether or not home buyers of good taste will continue, over a period of time, to accept this particular style of design.

Plot plan showing building footprints, parking areas, and landscaping. A north arrow is located on the left side of the plan.

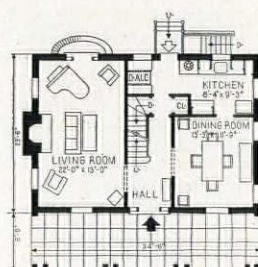
PLOT PLAN



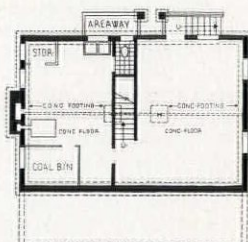
SECOND FLOOR



SECTION THRU WALL



FIRST FLOOR



BASEMENT

WOODWORK: Exterior doors— $1\frac{1}{4}$ in. white pine stock. Exterior trim, windows and frames—white pine, weatherstripped and calked. Doors— $1\frac{3}{8}$ in. white pine, 6-panel stock.

INTERIOR PARTITIONS: 2×4 in. gypsum lath, 2×4 in. studs, 16 in. o.c., and 2 coats smooth plaster.

BATH: Floor— $\frac{3}{4}$ in. ceramic tile, 4×4 in. matt glazed tile wainscot. Walls and ceiling—metal lath and 3 coats smooth plaster covered with washable wall covering.

KITCHEN: Floor—grade A inlaid linoleum over B & B pine. Walls and ceiling—gypsum lath and 2 coats smooth plaster covered with washable wall covering. Stock kitchen cabinets.

PAINTING AND DECORATING: Interior woodwork—3 coats enamel. Walls and ceilings—papered. Exterior woodwork—3 coats lead and oil, brick veneer, 2 coats masonry paint. Floors—fill, 2 coats shellac and wax.

PLUMBING: Hot and cold water supply—copper tubing. Drain and soil pipes—heavy cast iron. Tub—double shell recess. Vitreous china pedestal lavatories, low down closets, mixing valve showers. Sink—double drainboard apron front, double cement laundry trays. Light chromium fixture trimmings. Hot water tank—40 gallon copper, gas.

HEATING: One pipe steam, automatic gas-fired boiler, concealed cast iron radiators first floor, exposed, second floor.

ELECTRIC WIRING: BX cable, good grade panel boards, range wiring in rigid conduit.

SHEET METAL: Gutters, downspouts and flashing—16 oz. copper.

Although the plumbing fixtures and roughing-in are all that could
(Continued on page 486)

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(Continued from page 484)

be desired in a house of this class, light fixture trimmings are used which will necessitate early replacement. It is also felt that either a steam vapor system or hot water system would be more in keeping with the demands of potential purchasers than the one pipe steam system which is used. BX cable, together with good panel boards, are all that could be required in this class of property. Because of these reasons a weight of eight is ascribed to this feature.

NATURAL LIGHT AND VENTILATION. Due to the narrow width of this particular plot and the proximity to adjoining buildings, a weight of four is ascribed to this feature. Further, in this particular section of the country in which prevailing winds are from the southwest, principal rooms do not have the most desirable exposures. This condition is somewhat alleviated by an ample ratio of glass area to floor area and cross ventilation in each room.

ARCHITECTURAL ATTRACTIVENESS. This feature is rated with a weight of twenty. It is important to point out the underlying philosophy in the rating of architectural attractiveness. By virtue of the fact that risk rating in its entirety measures the degree of probable risk in mortgage transactions, this particular feature is always viewed from a "marketability" standpoint or the expectancy of the architectural treatment to remain attractive over a long period of time to prospective tenants or owners with reasonable tastes, rather than in terms of purity of design. Therefore, in considering the general impression created by this particular property, it is found that the highest rating is warranted because the architectural treatment of the site, planting, and building is such as to result in a harmonious entity creating a most agreeable impression.

Other considerations that aid in the formation of this opinion are: the elevations express frankly the plans contained therein; the design expresses refinement to a reasonable degree and a proper interpretation of the particular style; the fenestration gives a pleasing effect; rooms are properly proportioned; interior details are appropriately and attractively designed; the house and garage are well related to the composition of the entire property. As a consequence, the ensemble presents a forceful appeal to the typical potential purchaser.

HOME CLINICS GROW

more astute as Manhattan architects publish 30 plans.

LAST March, 14 New York architects united to form Manhattan's first venture into the Home Clinic, architecture's best answer to the depression. Labeled Small House Associates, this group provided a clearing house for the work and plans of its members, plus a full-time staff member to supervise routine. The association soon outgrew its original plans, branched out to include in its activities not only architects but realtors, engineers, material men, and builders, a change in policy which it signaled by changing its name to that of The American Society for Better Housing.

Last month the newer and bigger organization unveiled yet another wrinkle in its

THE PRONOUNCED TREND IN PRESENT DAY DESIGN has given rise to many novel and interesting treatments of glazed areas. Corner windows, window walls, picture windows . . . all invite the architect's careful consideration. Current emphasis upon the functional and decorative values of glass makes it increasingly important to use only the finest quality glass available. That is why so many modern buildings and homes are being glazed with L·O·F Polished Plate Glass. Its superior finish, crystal-like sparkling clarity and enduring brilliance make it the ideal medium for all purposes in which high quality is the deciding factor. Libbey·Owens·Ford Glass Company, Toledo.



Library of the George Oppen residence, San Francisco, looking toward the garden through a curved window area glazed with L·O·F Polished Plate Glass. Gardner Daily, Architect.



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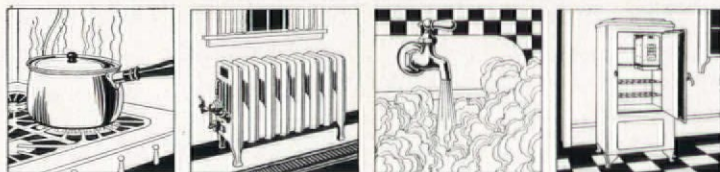
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


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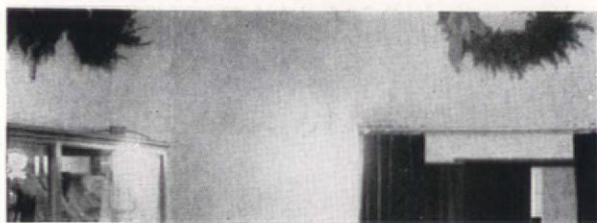
smart campaign for new business in the form of *Homes*, a 25 cent booklet. Genesis of *Homes* was another booklet, one put out last Spring by the Boston *Post*. Containing renderings, floor plans, specifications, and prices for 30 houses, it was sent for 25 cents to anyone answering a series of advertisements appearing in the *Post*. For an additional \$5 the *Post* supplied complete architectural plans for any house appearing in the book. The plan drew 9,000 queries in Boston; but its virtues as a sales campaign were considerably dimmed because the *Post* had no actual houses to display.

To the American Society the difficulty thus presented was not great. Member of the Society in good standing was Builder W. Burke Harmon, president of the Harmon National Real Estate Corp. on whose properties there were already standing fifteen houses designed by various members of the American Society. Nothing was simpler than for the Society, in close cooperation with Member Harmon to write their own book of *Homes*. Like its prototype, *Homes* contained plans, specifications, and prices of 30 houses; like its prototype, it was also available to coupon clippers for a quarter. Major difference resided in the fact that fifteen of the 30 homes in the booklet, designed by American Society architects, were already standing and ready for inspection on the various Harmon properties. Thus the prospect might inspect not only plans, but actual jobs done by the architects.

Builder Harmon undertook the sale of some twenty pages of advertising which appeared in the back of the booklet. With this revenue he was able to place no less than fifteen full pages of advertising in the daily metropolitan press, more than any book has ever received. First direct result of this neatly self-liquidating plan was some 15,000 queries and quarters within the first month. Enclosed with the booklets sent out were pre-stamped envelopes asking the purchaser to indicate whether he was interested in the booklet as a building professional or as a prospective home buyer. The first month brought 2,000 of these post cards to roost, revealed 1,600 potential home buyers.

Never mentioned in the booklet was the name of Harmon. However, directions to the fifteen houses actually erected landed the prospect on one or another Harmon property, a fact which served to put more potential buyers on Harmon land last month than had appeared during the entire year.

To the architects the campaign afforded a list of 2,000 mild prospects, 1,600 good ones. "The Society" reads an introduction to *Homes*, "will benefit only from contacts . . . and from such business as may result." That this form of business solicitation was entirely ethical was evinced also in *Homes*, which displayed the approval of the local chapter of the A. I. A.



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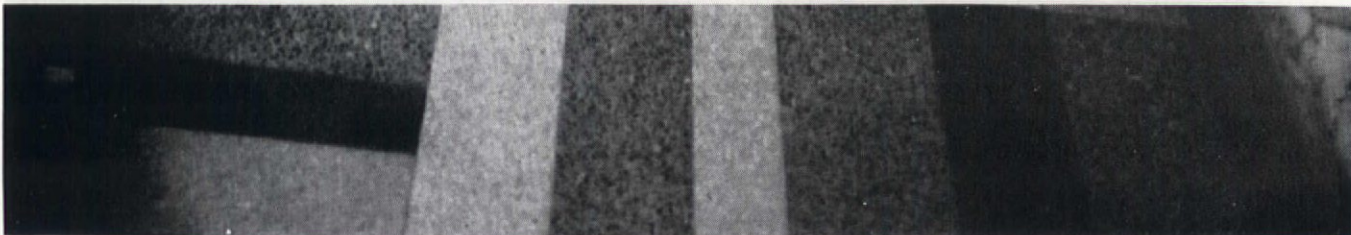
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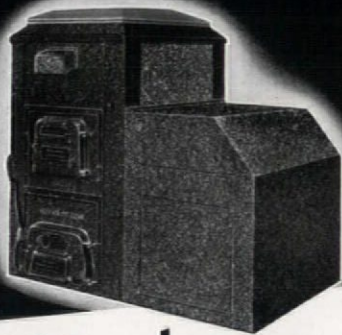
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WHOLESALE REMODELING

redeems a blighted area in Louisville, Ky., and sets a new standard in realty reports.

FROM among the many answers to the problem of how rental properties may be restored to a profitable basis, the Depression has focused attention on remodeling and renovating as the most spectacular. There is little doubt, however, that some of the remodeling of the past three years represents money from which the remodeler would have gotten the same results had he thrown it out the window. Usually the reason for this has been the fact that the property was situated in a blighted area to which popularity would never return.

Facing this problem, the owners of property along a squalid block in Louisville, Ky. pondered jointly the fate of a block including a burlesque theater, a shooting gallery, several run-down office buildings, a traction station, and a pool parlor. The result of this cooperative effort was the decision to raise the value of each property by raising the standard of the entire block through group remodeling.

That was three years ago. At that time, most of the fifteen owners of property along either side of Jefferson Street, between Third and Fourth in Louisville, met in the offices of A. J. Stewart, Vice-President of the Fidelity and Columbia Trust Co., who had undertaken to guide them.

A director of the NAREB and a member of PWA's Housing Division Advisory Committee, Sponsor Stewart is by all odds Louisville's best-known real estate expert. Under his guidance, the group commis-

sioned the real estate department of Stewart's trust company to present an analytical report which would show not only what was detrimental to the block values, but also what should be done to get them back to the 1927 level. The idea received the backing of all but one of the fifteen property owners interested. The expenses were borne proportionately.

The report, as finally submitted by Vice President Stewart, is a model of hard-hitting frankness. Such plans as this one have in the past been enervated through mutual politeness and a desire to stay off the next man's toes. But in this case no attempts were made to gloss over any of the factors, large or small, contributing to the block's depreciation. Typical observations: "This building needs a general overhauling and undoubtedly is contributing largely to the backward movement in the block. The . . . tenant's business . . . is being operated in a very low-grade manner . . . The entire front should be changed . . ." "This building . . . would contribute to the welfare of the block if the tenant could be persuaded to dispense with many of the unusual signs occupying every inch of the front . . ." "The front of this building is a product of a time when American architecture must have reached its lowest ebb . . ."

The results were significant. Work actually undertaken and executed to date represents expenditures totaling more than \$125,000. All of the property within the

(Continued on page 36)



North side of West Jefferson Street, after changes recommended.



HOME OWNERS' DOLLARS ARE SAVED WITH THE G-E RADIAL WIRING SYSTEM

Your clients are exacting in their demands for modern living. They have been told of new conveniences that electricity can offer them. They have visited model homes . . . seen up-to-date electrical advantages. They insist that their new homes be electrically adequate. They expect you to interpret their ideas and suggestions into practical working plans.

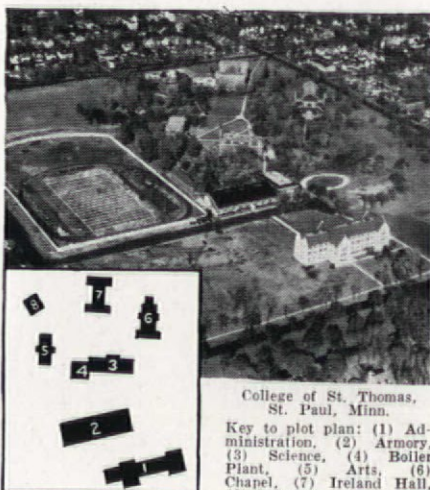
Your familiarity with new methods and materials assures your clients of a *first cost that is just*. A knowledge of the G-E Radial Wiring System will save your clients money in another important way. *It assures them of economical operation year after year*. This is vital to every home owner.

When you specify the G-E Radial Wiring System, you can dismiss the electrical part of a home as a job well done. It will advertise the wisdom of your judgment by the improved efficiency of lights and appliances. In order that you can explain the economical convenience of this system, write for complete information. Address Section CDW-9111, Appliance and Merchandise Dept., General Electric Co., Bridgeport, Conn.

GENERAL ELECTRIC

RADIAL WIRING SYSTEM

APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONN.



COLLEGE OF ST. THOMAS GETS IMPROVED HEATING

Webster Moderator System Gives
Catholic College Dependable
Central Heating Control

SAVES \$1,600 ANNUALLY

St. Paul, Minn.—The cost of heating eight buildings on the campus of College of St. Thomas has been reduced as much as \$466.75 in a single month, as the result of a Webster Heating Modernization Program completed in December, 1934.

Costly and cumbersome "cruising" of the campus to adjust manual heat controls has been eliminated. Each building has its own operating schedule but steam distribution is controlled from a central point. The basic rate of steam delivery is regulated by an automatic Outdoor Thermostat.

Webster Central Heating Control allows the college authorities to revise the general heating schedule, as classroom schedules are made up, thereby taking full advantage of the economy gained by shutting off steam whenever a building or zone is unoccupied.

Building owners, their architects and engineers, find in Webster Systems of Steam Heating and Webster Heating System Equipment the assurance of perfect coordination in operation. Traps, valves, orifices, concealed radiation, central heat controls—all are products of one manufacturer under undivided responsibility both as to application and service.

The installation at College of St. Thomas was made by J. McClure Kelly, Minneapolis heating contractors. There is a total of 36,651 square feet of installed direct radiation.

The Rev. J. H. Foran, Business Manager of the College, expresses satisfaction with the performance of the Webster Moderator System.

Other college buildings heated by Webster Moderator Control include such installations as the central heating system for 22 buildings at Mount Holyoke College, and five buildings of the University of Minnesota.

If you are interested in heating new buildings, or in improved heating service and lower heating cost in your present building, address WARREN WEBSTER & CO., Camden, N. J. Pioneers of the Vacuum System of Steam Heating Branches in 60 principal U. S. Cities—Estab. 1888

(Continued from page 490)

block has been repainted and redecorated. About 40 per cent of the owners have installed new fronts and front elevations. And Sponsor Stewart believes that as a direct result of his report as much more work again will be undertaken next year.

As an example of how profitable these operations have proved, consider the Tyler Building, largest property in the block. With stores on the first floor and offices on the three top floors, the property has a frontage of 211 ft. Abnormal depreciation caused by neglect has shrunk the net income from 1927's peak of \$24,295 to a point where the fixed and operating expenses, before any interest or depreciation was charged, represented a net loss of approximately \$10,000 in 1934. But for 1935, after Architect W. S. Arrasmith's ministrations, the gross income had increased so that the entire operating deficit was wiped out, and the building will probably net upwards of \$5,000 for 1936.

Sponsor Stewart's unequivocal report has reaped steady harvests. For sixteen properties specific recommendations were made, covering superficial repairs. All save three owners responded. More basic renovations have been accomplished by the three largest property owners, and Mr. Stewart believes that by the end of two years all of the buildings along the block, with few minor exceptions, will have followed their lead.

As a result of the block's improved outlook, some national manufacturers have established offices and stores on either side of the street, while local merchants who were seriously considering abandoning their former buildings have decided to stay.

From his experience with Jefferson Street, Sponsor Stewart has drawn the following conclusions:

1. It is more practical to obtain the co-operation of property owners in a small area, such as one or two city blocks, than in a larger area.
2. The real benefits from a well-planned, intelligent improvement program will extend over a period of years.
3. Better class tenants will return to areas from which they have migrated if conditions that caused the migration are removed.
4. In any city cooperative planning can be used to enhance values on almost all properties in secondary business sections.

On the next page is the south side of West Jefferson Street between Third and Fourth Streets, pictured before the changes embodied in Sponsor Stewart's unglossed report, which is reproduced verbatim beneath. Changes since the report: all save three owners have followed one or more of its suggestions.



One Family Residence:
Verna Cook Salomonsky, Arch.

1 or 1,406



Hillside Housing, New York City:
Clarence Stein, Arch.

WHETHER
for a charming one-family residence or a gigantic development like the 1,406 units in the Hillside Housing project in New York City, architects for the past 20 years have continued to specify



**FLAT FINISH
for FLOORS and TRIM**

for two potent reasons:

1. Because Minwax has earned the enthusiastic endorsement of owners and tenants.
2. Because for beauty of finish, for serviceability and economy it has met the owners' demands and proved the soundness of the architects' judgment.

Minwax is the *penetrative* finish that both stains and waxes. It brings out all the fine beauty of the grain and gives a smooth, lustrous finish obtainable by no other method. Moreover, since the Minwax finish is *in the wood itself* and therefore "patchable" as to color and finish, no rescraping is ever necessary.

Write for Details

Minwax Products are catalogued in Sweets—but you are invited to write us at any time for special wood color chips and specifications.

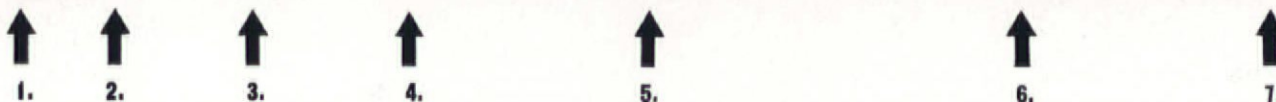
MINWAX CO., Inc.

Dept. AF 11

11 West 42nd St., New York

In Canada:

THE ATLAS ASBESTOS CO., LTD.
110 McGill St., Montreal



1. Tenant: Oyster Inn.

This type of front and occupancy is typical of the kind that causes rapid deterioration of values in a neighborhood. It would be to the interest of the owners, in the block, to thoroughly remodel this unit and install a modern front. Painting the upper portion of this building and making minor repairs that are needed to the exterior of the building should not cost more than \$450, including new store front.

2. Tenant: Thompson's Restaurant.

The storeroom is occupied by the Kentucky Gold Refiners at a very low rental, considering the potential value of the land and improvements. It is our understanding that they are subtenants of the Thompson Restaurant. [See sign.] Unless the Kentucky Gold Refiners have a long lease, some enterprising broker could earn a fee by securing a substitute tenant . . .

[The next store] is occupied by the Thompson Restaurant, and while a tenant of this type does not particularly add to the neighborhood, neither does it detract. There are unattractive signs on these premises, which we feel sure will be removed if Thompson's attention is called to same. Undoubtedly, Thompson's will discontinue their practice of plastering their windows with streamers as soon as they are again doing a normal business. The appearance of this building could be greatly improved by general cleaning, tuck-pointing, and painting. The entrance to the upper floors could be improved by keeping it cleaner and re-decorating at this time. We would suggest in this remodeling that the metal sign above cornice be removed and the name of the building be placed in a more suitable location. All of the work needed to make

this building stand out would probably not cost more than \$200.

3. Tenant: Traction Station and the Woods Fruit Stand [Right].

A traction station, or any form of terminal for a transportation system, can benefit a district in which it is located; sometimes, however, it has been known to harm property in its immediate neighborhood. This property is not attractive and I believe the Railway Co. could be persuaded, in cooperation with other property owners, to improve the entrance to their general offices and persuade . . . the Woods Fruit Stand to conduct their business within the leased premises. Any well-informed architect could arrange the premises rented as a fruit stand in such a way as to increase the potential earning power of the store. The building certainly should be cleaned by sandblasting, steam washing or stone dressing, and the trim painted. Cleaning up the entrance to this building, remodeling the commercially leased space, and cleaning the building, would probably not cost in excess of \$1,000, depending upon the arrangement given the tenant on the first floor. Doing this work would give great impetus to the movement to restore this block.

4. Tenant: Orpheum Theater.

The front of this building is a product of a time when American architecture must have reached its lowest ebb. This front could certainly be given some different treatment that would justify itself by the added revenue that could be obtained. We would recommend to this owner that consideration be given to changing this front . . . We would suggest that the entire plaster work be removed and a modern front in precast stone be installed. Estimated cost: \$650.

5. [322-24 For Rent]. 326, Tenant: Ralph's Lunchroom.

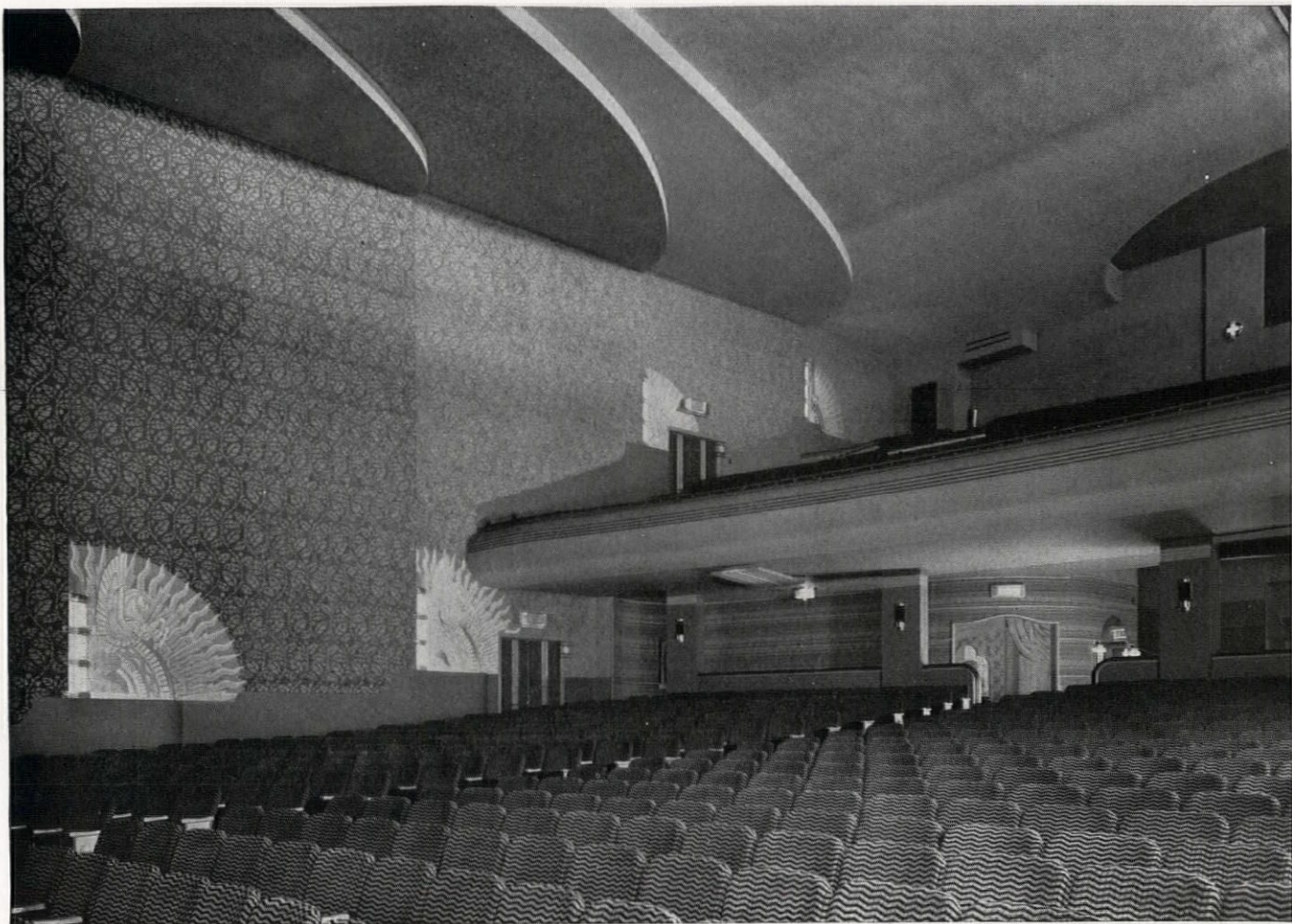
This building is a reasonably attractive structure that could be made entirely so by thoroughly cleaning the front and painting the woodwork. Ralph's lunchroom and fruit stand is the type of tenant that could be made useful in the block, if properly operated.

6. Tenant: Hub Billiard Parlor and Big Six Cafe.

The upper part of this building should be tuck-pointed, and present bay windows at second and third stories should be removed and modern windows installed. Most of the signs now on the premises should be removed, and the remaining ones freshened. The front installed for this tenant is typical, but the occupancy is the type that tends to gradually depreciate values in such a location as Jefferson Street between Third and Fourth Streets. Toning up the block and a general campaign to improve the tenancy in the block should gradually increase rentals to a point where this type of tenant would be forced to move to a more suitable neighborhood . . . Repairs and redecorations needed should not cost in excess of \$350.

7. Tenant: Vacant. [Shooting Gallery]

This is a four-story building, the exterior being stucco over brick. The front . . . is unattractive and obsolete and would probably have to be replaced to secure a satisfactory tenant. The front part of the upper building should be thoroughly scraped and either re-treated with stucco or given such other treatment as a competent architect or contractor would advise. The cost of treating the exterior elevation of the upper floors, washing and cleaning the property, removing the signs, etc., should not be in excess of \$250, unless it is necessary to re-stucco . . .



DOUBLE FEATURE, STARRING 'INCOR'

Perhaps you are facing the same kind of problem which John Eberson, New York architect, solved last Fall in completing Washington's new Penn Theatre. Behind-schedule construction and approaching cold weather, with its concrete frost-hazard, meant overtime and costly heat-protection to the contractor—delayed opening date and lost revenue to the owner. Mr. Eberson got both parties together, and they decided to use 'Incor' 24-Hour Cement for the all-concrete balcony, with its inclined beams and supporting risers, 20-foot cantilevered span.

District of Columbia Code specifies 21-day shore removal in fall and winter. 'Incor' test cylinders, job cured at 51° by building inspector, averaged 5-day strengths of 2160 lbs.—exceeding the 28-day requirement with ordinary cement. Result, riser forms stripped in 4 days, beams in 6 days. Total of 15 days saved by using 'Incor', theatre opened on time, owner's revenue protected.

A 15-day time saving, with job overhead \$50 a day, means a \$750 cash saving, and 'Incor' also saves costly heat-protection, because it is self-supporting, safe from frost-hazard, in one-fifth the usual time. An important two-way saving, which suggests that architects consider the economy of changing to 'Incor' on jobs now in progress. Write for free copy of new book, "Winter Construction"—address Lone Star Cement Corporation, Room 2210, 342 Madison Ave., New York . . . 'Incor'* and Lone Star Cement sales offices in principal cities.

*Reg. U. S. Pat. Off.

'INCOR' 24-HOUR CEMENT

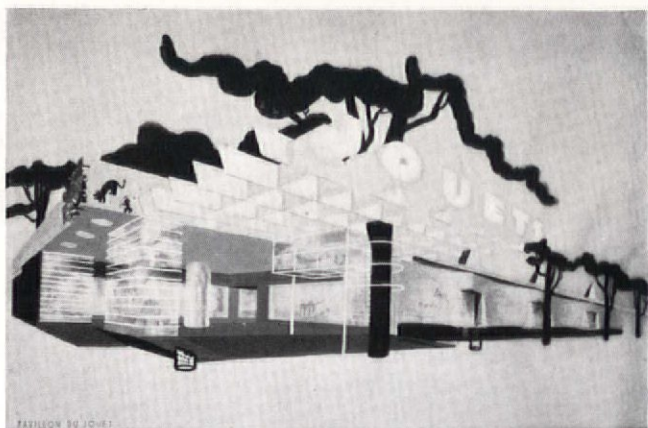
FORUM OF EVENTS

(Continued from page 8)

miles, concentrates its major buildings in an area about a mile square, a scheme due to the location of the important entrances and to the physical character of the site. In this space a symmetrical scheme has been adopted, with radiating avenues connecting the important centers. A final important factor conditioning the design was the necessity of so planning the site that it can be converted into a park after the fair with a minimum of change and expense.

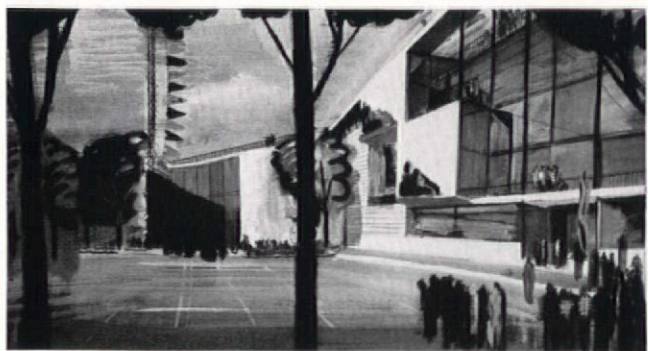
PARIS FAIR

Two years nearer completion than New York's fair is the Paris Exposition of 1937. Smaller in size and scope, with a theme restricted to the arts and techniques of contemporary life, the Paris fair will show the relationship of modern art and modern techniques, notably mass production. Private firms will exhibit only by invitation and their displays will be under the absolute control of the fair authorities. This



TOY PAVILION

H. Beranger Photos



INTERIOR DECORATION PAVILION

fortunate state of affairs is due to the fact that the fair is being entirely financed by the proceeds from a number of State lotteries, and no charge for space is made to exhibitors. Architects for the various buildings and groups were selected by numerous competitions. Two of the results are shown here, a playfully conceived Toy Pavilion, where the use of trees and elementary forms suggests the character of its contents, and a large pavilion of Interior Decoration, designed so that it has something of the character of a swank shop dealing in modern furniture, fabrics, and similar articles. Brilliant in execution, imaginative, and modern in design, they suggest that in the standard set by Paris in 1937 New York's fair designers will find incentive and inspiration.

(Continued on page 40)

This Factory-Fitted Storm Sash Seals Your Window Opening TIGHT



The Ordinary Storm Sash, hand-fitted on the job, is often loose

● Check the new Fenestra Inside Storm Sash for weathertightness: With the swing leaves of the outer Fenestra Casement Window wide open, move a cigarette lighter slowly around the perimeter of the Storm Sash. The flame burns without a flicker, for no air enters . . . Precision-built by craftsmen, the Fenestra rubber-baffled Inside Storm Sash seals the window opening tight. Its metal frame does not warp, swell, shrink or stick—never requires refitting. Write for details. DETROIT STEEL PRODUCTS CO., 2252 East Grand Boulevard, Detroit, Michigan.

Fenestra

NEW INSULATION DATA

FOR YOUR INFORMATION AND REFERENCE

**AMERICAN ARCHITECT
TIME-SAVER
STANDARDS**

Bright metal insulation is one of the most discussed subjects in architecture and building. In order to provide you with the latest, authoritative data, we have prepared a Time Saver Standard Sheet on Reynolds* Metallation, giving established facts about its efficiency and approved methods of installation. We are glad to offer copies of this Time Saver Standard Sheet to all architects, so that their offices may be fully informed on the subject of this increasingly popular insulation.

In Brief: Metallation provides permanent high-efficiency at very low cost; its insulating value is not impaired by moisture; it saves time and expense in heating or cooling a structure because of its low heat storage capacity. We believe that Reynolds Metallation, according to all known tests, gives more insulation *per dollar* than other materials. Its use leaves more dollars to be spent on other parts of the building. In these days of tight budgets it solves many a knotty problem.

Use the coupon below or your letterhead for your copies of the Time Saver Standard Sheet on Reynolds Metallation.

REYNOLDS CORPORATION
19 RECTOR STREET NEW YORK

Reynolds Air Conditioning; Metalumber framing, joists and slabs;
Metallation; Ecod Fabric reinforced plaster-base; Paints;
Liquid Metallation; Steel Windows.

REYNOLDS CORPORATION,
19 Rector Street, New York

Name _____

Address _____

Number of copies desired _____

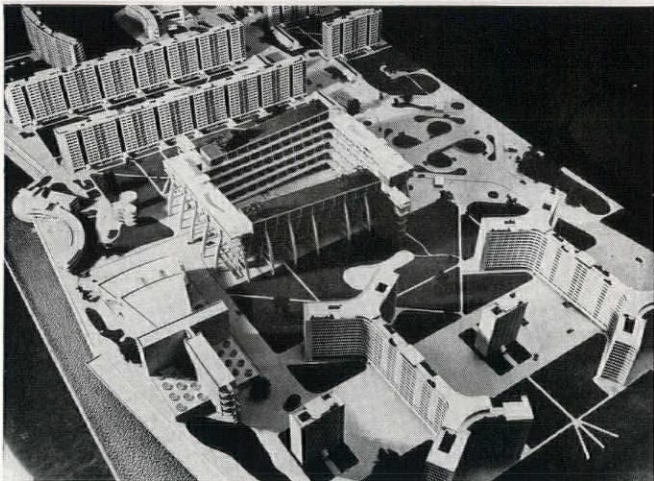
* Trade-Mark Reg. U. S. Pat. Off.

FORUM OF EVENTS

(Continued from page 39)

CONCRETE CITY

ONE of the features of the British Building Exhibition at Olympia is a model of a concrete city of the future, designed by Marcel Breuer and F. R. S. Yorke for the Cement and Concrete Association. Like an increasing amount of English work, the city is modern in character, follows the lead of Le Corbusier in its use of buildings on stilts to allow traffic to pass beneath, shows the preoccupation of the modern archi-



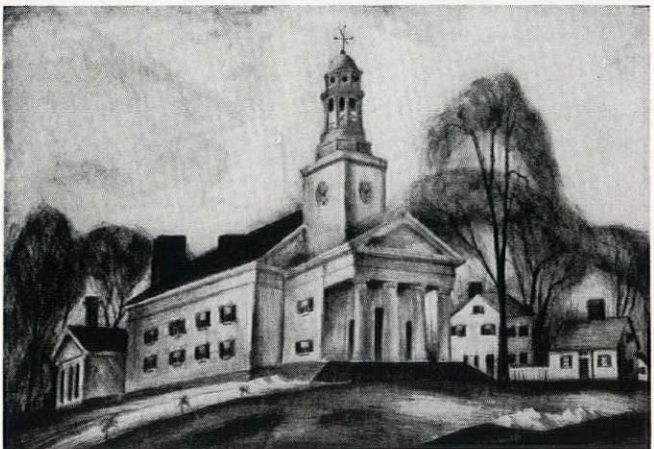
Globe

FUTURE CITY

tect with light and air. Oddest of the constructions is the shopping center, an arena-like structure which reverses the usual setbacks. Blocks of housing are located in the rear, and office buildings and a theater appear in the foreground.

DEMOCRATIC ART

"JUST as the invention of printing has facilitated the wide dissemination of literary learning by placing it within the reach of all, so the invention of the graphic arts has made possible the introduction of visual art in the homes of the people." It is in an attempt to make this statement a fact from the point of view of price as well as production that the



LITHOGRAPH BY WARREN NEWCOMBE

American Artists Group has been formed. The group includes a large number of etchers, lithographers, and other makers of prints, and numbers among its members many well known artists such as Rockwell Kent, Louis Lozowick, John Marin, Reginald Marsh and others. Their prints sell for \$2.75.

(Continued on page 42)

What telephone arrangements will you plan for the Webers

PROBLEM
No. 4



if they build this house?

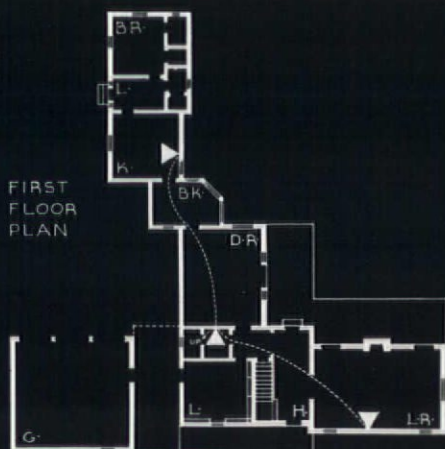
FRED WEBER is "on the way up" in the printing business. He's going to build his home now—so the whole family can enjoy it while the children are growing. The plans on this page have been tentatively approved. *What provisions will you make for telephones?*

First of all, built-in conduit or pipe to avoid exposed wiring and protect against certain types of service interruption. Also, the Webers may want to add more telephones later on. Conduit, leading to outlets at strategic points, makes further telephone installation easy . . . even with the permanent, modern building materials you specify today.

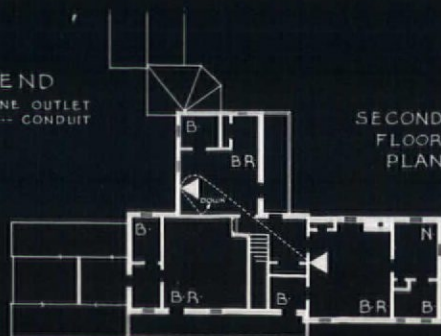
An outlet belongs in the master's bedroom. When the girls grow up they'll want a telephone for their own use, so conduit should lead to the room they'll occupy. Three outlets will be enough for the rambling first floor. One in the living-room. One in the hall closet, easily accessible from the dining-room and library. And one in the kitchen to serve the rear of the house.



This is a suggested approach to a typical problem. Our engineers will help you develop efficient, economical conduit layouts at any time. No charge. Call your local telephone office and ask for "Architects' and Builders' Service."



LEGEND
TELEPHONE OUTLET
CONDUIT



Gar Wood

TEMPERED-AIRE



DOES A PROFESSIONAL JOB



An increasing number of architects and builders prefer Gar Wood Tempered-Aire air conditioning because of the thoroughly professional manner in which it is engineered into each home and, in consequence, the thoroughly professional job of air conditioning that results.

Gar Wood Industries assume full responsibility for the correct functioning of their air conditioning systems. Field engineers, operating out of branches and distributors' organizations, work with architects and builders, from the very framing of the house, through the layout and installation of the system, placing their vast experience at your disposal on each and every job.

Write for details, which should be in the office of every architect who has domestic heating and air conditioning problems.



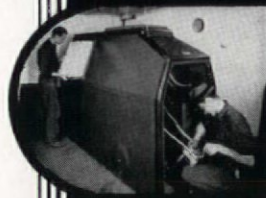
AIR CONDITIONING DIVISION
GAR WOOD INDUSTRIES, Inc.
DETROIT ★ MICHIGAN



Field engineers make an exact layout for every Tempered-Aire installation.



They also supervise every step of the installation work.



They leave the job only when the unit is ready to operate.



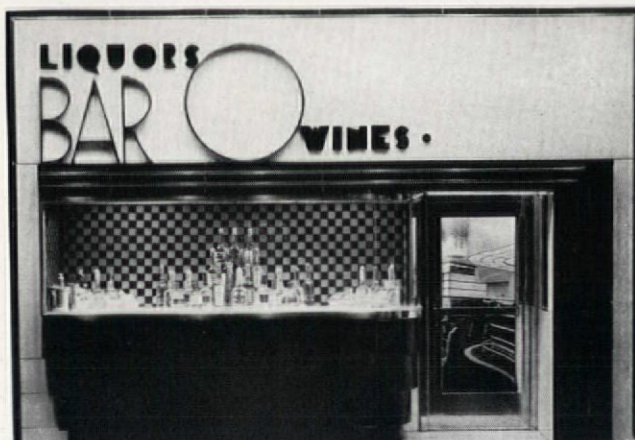
The result is a professional job of air conditioning—and satisfied owners.

FORUM OF EVENTS

(Continued from page 40)

STORE FRONT CARAVAN

As part of an extensive advertising campaign, the Pittsburgh Plate Glass Company has built and sent on tour a traveling exhibition of model store fronts. The exhibition consists of twelve models, representing a bakery, gift shop, grocery, shoe store, haberdashery, drug store, women's accessory shop, jewelry, a five-and-ten cent store, and a perfume shop. The models are superlative in craftsmanship and extremely interesting in design. The models are constructed of the materials that would be used on the actual store fronts,



LIQUOR STORE



Johnston & Johnston Photos

GIFT SHOP

and the show windows contain miniatures of bottles, jewelry, clothes, and other accessories on display. The exhibit will visit all the principal cities east of the Rockies; the itinerary will take one or two years. It should be of considerable influence in stimulating further remodeling work, and plans of the fronts shown will be made available by the company for the use of local architects.

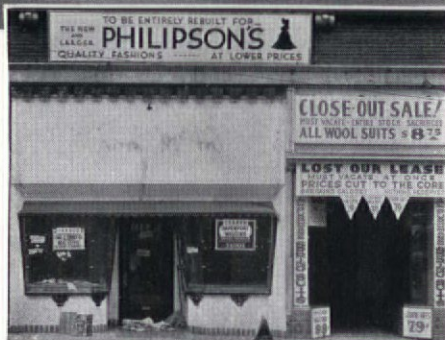
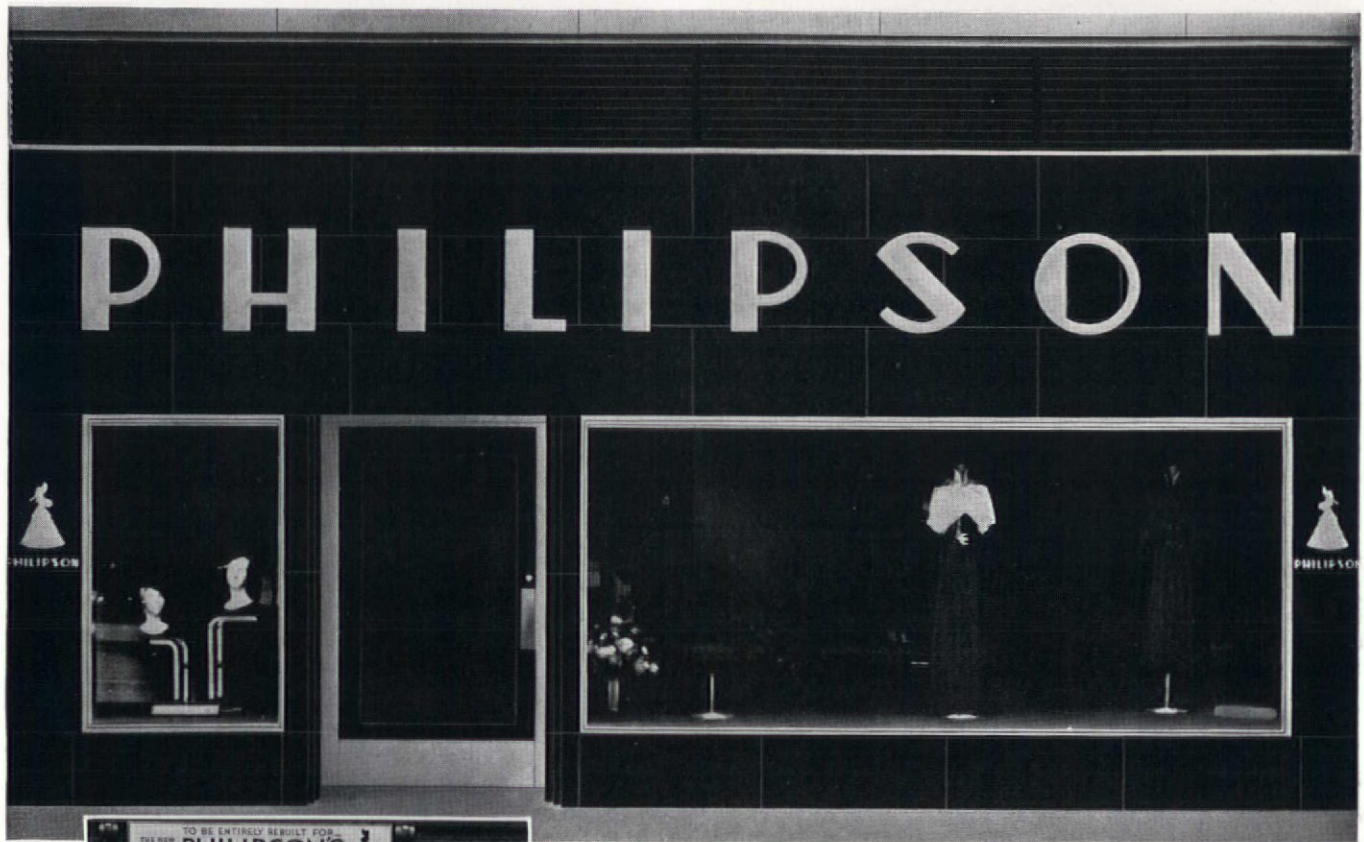
ARTIFICIAL SUN

An "artificial sun" which will enable architects to design buildings more scientifically, testing their designs for orientation, has been constructed in the Town Planning Studio of the Columbia University School of Architecture. Sir Raymond Unwin, Director of the Studio, will be in charge of the studies. The angle at which the sun strikes a building at any given hour is at present determinable, of course, but the heliodon, as the new instrument is called, will make the task simpler and the results more accurate.

(Continued on page 44)

STORE FRONTS BUILT WITH PITTCO PRODUCTS

Satisfy Clients and *satisfy* YOU



Here is a property in Dallas, Texas, as it appeared before and after Architects Geo. E. and W. O. Christensen transformed it with a handsome new Pittco Store Front. Jobs like this please clients and reflect credit on you.

Listen to "The Music You Love" rendered by the Pittsburgh Symphony Orchestra and distinguished guest artists every Sunday from 2 to 2:45 P. M., E. S. T., over Columbia Network and associated stations.

WHEN you design an attractive, well-planned store front for a client, you naturally want your design executed faithfully. You can be sure it will be, if you use Pittco Store Front Products.

These glass, metal and paint products are of such fine quality, are so versatile and adaptable to different handlings and treatments, that you can obtain almost any effect you desire by their use. And once finished, the job is certain to be not only pleasing and profitable to your client, but a job you can acknowledge as yours with pride and satisfaction.

If any of the property-owners or merchants in your community would like to re-

model their stores with new Pittco Fronts, but hesitate to do so for financial reasons, the Pittsburgh Time Payment Plan will solve their problem. This plan permits them to pay for store front remodeling . . . and all related work . . . out of income . . . in easy monthly installments . . . and it also provides for your architect's fee.

Each month, our staff of store front experts, maintained to cooperate with architects on problems of construction and product application, prepare a style suggestion on some type of front. If you have not already done so, we invite you to place your name on our list of architects receiving this "Design of the Month" service. Merely fill in and mail the coupon.

CARRARA STRUCTURAL
GLASS
PITTCO STORE FRONT
METAL
PITTSBURGH MIRRORS

PITTCO

STORE FRONTS

glass...metal...paint

PRODUCTS OF

Paint PITTSBURGH *Glass*
PLATE GLASS COMPANY

PITTSBURGH PAINT
PRODUCTS
POLISHED PLATE
GLASS
TAPESTRY GLASS

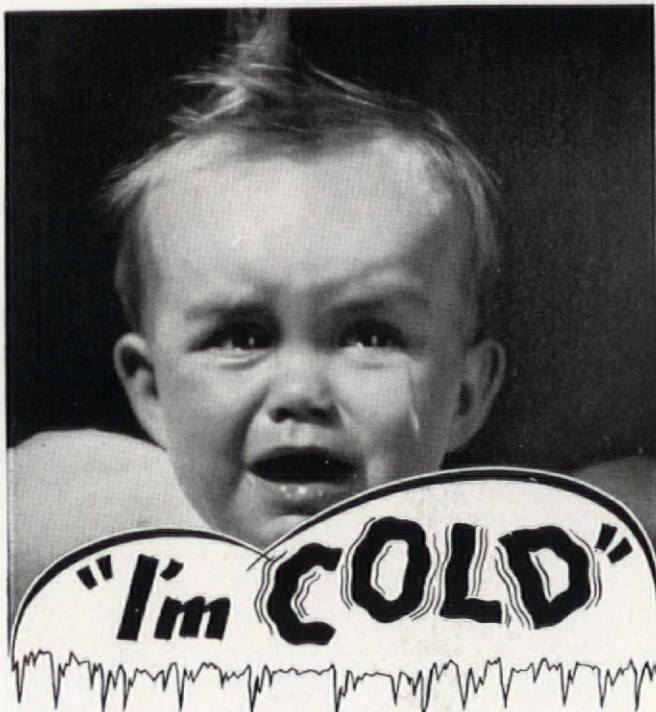
Pittsburgh Plate Glass Company,
2312B Grant Bldg., Pittsburgh, Pa.

Please enter my name on your list of architects who will receive your store front "Design of the Month" suggestion regularly each month during 1936.

Name _____

Street _____

City _____ State _____



Drafty rooms, cold floors, uneven temperatures throughout the house...no wonder this little fellow rebels! But there is no reason why this should happen in the homes you plan. Safeguarding health and providing comfort for your clients are services they'll appreciate more than any other... especially when you can assure these benefits at a *saving of up to 50% of fuel costs!*

You can do this by specifying Gimco Rock Wool Insulation. According to U S. Bureau of Standards tests, its effectiveness in retarding heat leaks is unsurpassed in home building insulation. It is fire-proof, moisture-proof, and vermin-proof. It will not pack down, dust out, disintegrate, or deteriorate. Gimco lasts as long as the house itself, and adds greatly to the permanent value of the property.

Let us tell you more about Gimco Rock Wool, and how our local dealer is prepared to cooperate with you. Just write to the General Insulating & Mfg. Co., Alexandria, Ind.



Gimco is easily blown into empty wall and ceiling spaces in homes already built.



Gimco bats are easy to install in buildings under construction.

Gimco
ROCK WOOL

HOUSE INSULATION

Made by the world's largest exclusive manufacturers of Rock Wool Products

FORUM OF EVENTS

(Continued from page 42)

The heliodon is a spotlight that may be moved up and down on a shaft, marked according to the months of the year. The light is focused on a platform mounted on a smaller shaft, located 8 ft. away. On this platform is placed a small model of the proposed construction, with shade trees, etc., made at the proper scale. The platform is tilted until its position in relation to the artificial sun corresponds to the building's latitude; by revolving the platform, whose shaft is marked according to hours, the amount of sunlight and shade on the building during the day and at any time of the year can be studied.

Henry Wright, Jr., of New York, built the heliodon, said to be the first in this country. Its design is based on plans drawn up by the Royal Institute of British Architects. Preliminary work on the Columbia machine was done by Mr. Wright's father, who, before his death on last July 9, was a professor in the School of Architecture.

One result of the studies made with the heliodon may be the return of the cornice, in a form rather unlike the traditional one, due to its unquestioned value in providing shade during the hottest hours of the day.

DEATHS

PETER SCHREINER, 83, retired architect and builder, at his home in College Point, L. I.

Son of one of the first settlers of this community, Mr. Schreiner specialized in residential work, and was responsible for the erection of more than one-fourth of the buildings in the town. In addition to houses he built a number of factories and other commercial buildings.

WILLIAM F. McCULLOCH, 65, architect, of a heart attack at his home in Hempstead, L. I.

Mr. McCulloch was born in Gilbertsville, N. Y., and was graduated from Cornell University in 1895. He was associated with the New York firm of Hopping & Kohn for over twenty years, after which he went into practice in Hempstead. He was president of the Long Island Society of Architects and vice-president of the Nassau County Art League.

PAUL E. DENIVELLE, 64, sculptor, at his home near Lake Tahoe, California.

Mr. Denivelle was a native of France and went to San Francisco in 1915 as supervisor of modeling at the Panama-Pacific Exposition. He was awarded a medal at the Exposition for his work. His best known work was the invention of imitation travertine.

CHARLES F. HENNING, 55, engineer and executive, after an automobile accident.

One of the most widely known figures in the building industry, Mr. Henning was vice-president and general sales manager of the United States Gypsum Company. Virtually his entire business career was spent with this company. He entered it twenty-eight years ago, following his graduation from Lewis Institute.

ANNOUNCEMENTS

THE WPA Design Laboratory, 10 East 39th Street, New York City, announces the opening of the architectural design studio for architects and draftsmen. The course is based on contemporary conditions and will deal with the fundamental elements of functional planning and design. Students will choose their own problems, which will in all cases deal with

(Continued on page 46)

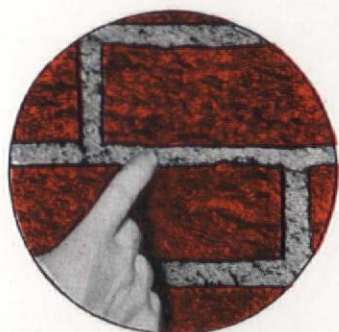


Photo shows ordinary mortar joints—shrunk, cracked, permitting rapid water seepage.

PROOF THROUGH PERFORMANCE

... Mortar shrinkage
checked with

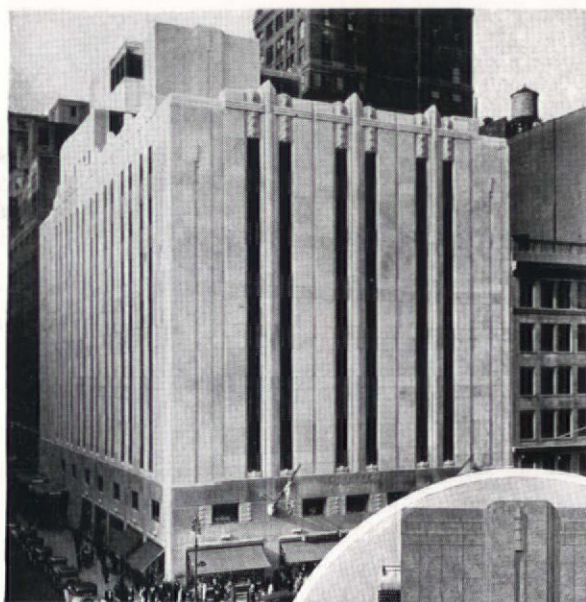


Photo shows how Omicron Mortarproofing maintains bond between brick and mortar. No shrinkage!

OMICRON

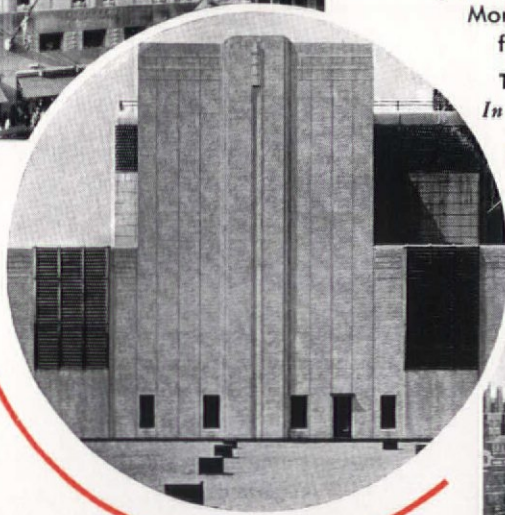
Mortarproofing

TRADE MARK



(Above:) S. H. Kress & Co. new Fifth Ave. Store, New York. Edward F. Silbert, Architect. Michael Wielandt Co., General Contractors.

(In circle at right:) Close-up view of the brickwork on the new S. H. Kress & Co. building. An exhaustive examination of the completed building revealed no shrinkage cracks in the mortar!



(At right:) Women's College Hospital, Toronto, Ontario, protected by Omicron Mortarproofing. Stevens & Lee, Architects, Harkness & Hertzberg, Contractors.

• Positive protection against shrinkage cracks and bond failure . . . the real causes of leaking brickwork!

Used with all types of mortars on major projects throughout the nation, Omicron Mortarproofing has proved through performance its ability to reduce shrinkage by 50% or beyond the point where the bond breaks. Authorities agree that all mortars SHRINK, whether lime, patented masonry mortars, cement—waterproofed or otherwise. Omicron Mortarproofing is the first successful solution to the problem of mortar shrinkage—so successful that many architects and builders call it "brickwork insurance!"

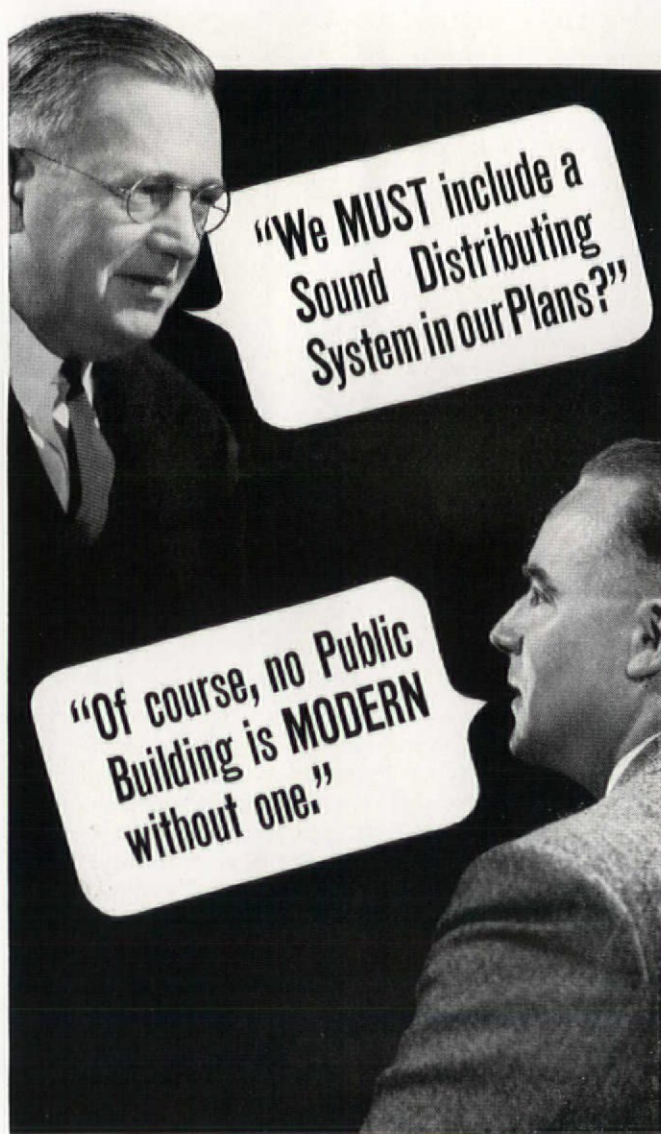
On the completely weatherproofed buildings illustrated here, the cost of Omicron Mortarproofing was less than 1% of the cost of the brick installed. In your own and your clients' best interests, learn what Omicron Mortarproofing can do for you! Write now for full information.

The MASTER BUILDERS CO. • Cleveland, Ohio
In Canada: The Master Builders Co., Ltd., Toronto



MASTER BUILDERS





When you next plan a school, hospital, hotel or auditorium, ask a Graybar engineer to tell you about Western Electric's new Sound Distributing System. You will find that it fits into your plans perfectly—that it will help to make your building more modern and useful.

Graybar has every facility for helping you plan installations to meet your specific needs. And the quality of Western Electric apparatus is assured by that Company's record in making Bell Telephones and other Sound Transmission equipment.

For booklet and full details, write Graybar Electric Company, Graybar Bldg., New York, N.Y.

Western Electric
PROGRAM SOUND SYSTEMS
Distributed by GRAYBAR Electric Co.
In Canada: Northern Electric Co., Ltd.

FORUM OF EVENTS

(Continued from page 44)

actual sites. A minimum of two and a maximum of three problems will be required for each term. Professor Jan Ruh-tenberg of Columbia will be in charge. Mondays, Wednesdays, Thursdays, and Fridays, 7:30 to 10:30 P. M.

The Metropolitan Museum of Art, New York City, offers a series of courses on Color and Design, their principles and applications. They are of practical value to all engaged in designing, styling, producing, or merchandising. A copy of the lecture program, giving dates and titles, will be mailed upon application. Courses are free.

PERSONALS

JOSEPH J. OTT and Robert T. Handren announce the formation of a firm for the general practice of architecture. The office is located at 49 West 45th Street, New York City.

Small House Associates, of 101 Park Avenue, New York City, announces that this organization is to be succeeded by The American Society for Better Housing, with offices at the same address. The Society will include as members properly qualified architects, and as associate members manufacturers of materials, lending institutions, realtors, and builders who are commonly interested in better housing.

John E. Alcott, Wilfred Thoner, and George Marsh, Boston designers, announce the formation of a partnership, under the firm name of Alcott, Thoner, and Marsh, for the practice of industrial design. The firm, first of its kind in New England, will have offices and workshop at Islington, Mass.

Munroe Walker Copper, Jr., and Edward G. Conrad announce the formation of a partnership for the practice of architecture, with offices in the Hanna Building, Cleveland, Ohio.

Mr. Canning K. M. Yang, a graduate of the University of Michigan, has been appointed architect for Szechuan University, which is planning the erection of an entirely new group of buildings. Mr. Yang would appreciate receiving manufacturers' catalogues. Address: Office of the Architect, Szechuan University, Chengtu, Szechuan Province, China.

Mr. E. B. Johnson has been appointed Director of the new Department of Architectural and Engineering Service of the U. S. Gypsum Company. The department will cooperate with architects and engineers on designing efficient construction of all types of buildings, with emphasis on low cost housing.

ERRATA

In the publication of the Nordic Theater in the September issue credit should have been given to John B. Manzer as the decorator.

Credit should have been given to the Johns-Manville Company for the manufacture of the acoustic tiles which were used in the Nordic Theater. They were perforated and unperforated Sanacoustic Tile and Perforated Transite Panels.

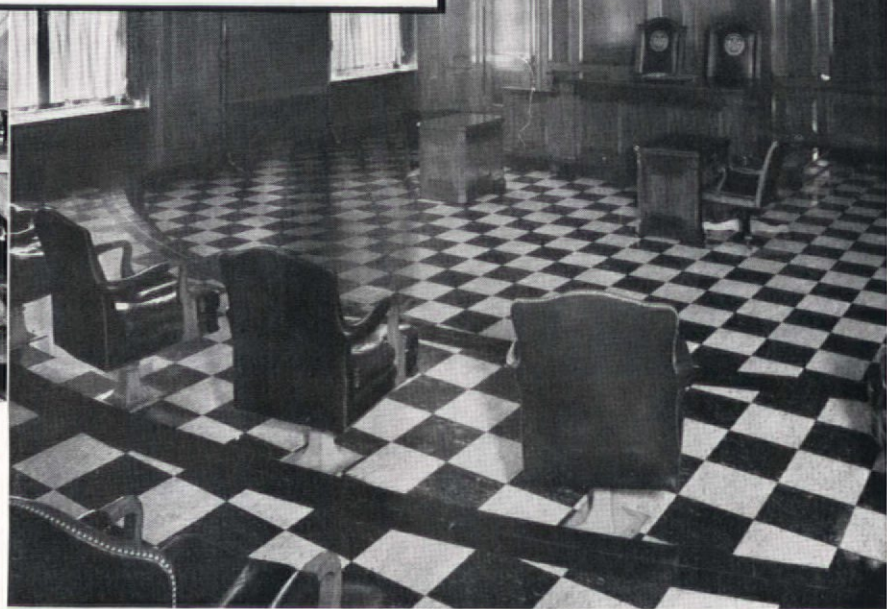
CLASSIFIED ADVERTISEMENTS

[Rates Upon Application]

WANTED—by old established company with good dealer policy, an active, producing sales organization to sell perforated metal grilles, perforated metal and allied lines in the Buffalo territory. Well-known line; liberal commissions; opportunity for good income. Full details first letter; names of accounts now handled, number of salesmen, territory covered, type of companies called upon, etc. Write to Box 21, FORUM.

For Lasting Beauty and Low-Cost
Maintenance in Public Buildings—

RUBBER FLOORING!



Color, beauty and "warmth" of decorative effect are added to dignity—in the new Bronx County Court House, New York City—by Goodyear Rubber Floors. Approximately a quarter million feet. Right, the Grand Jury Room; top right, Supreme Court; above, Jurors' Room. Architect: Jos. H. Freedlander.

IN public buildings—as in stores, shops, private homes and offices—Goodyear Rubber Flooring fulfills the desire for beauty, and satisfies the demands of budget. There are six important reasons why this is so:

DURABILITY—Goodyear Rubber Flooring "stays put"; withstands heavy traffic for years without appreciable wear.

CLEANLINESS—impervious to tracked-in dirt and slush. A damp mop keeps it spotless.

STAIN-RESISTANT—not marred by dropped cigarettes or matches; nor stained by alcohol, ink and most acids.

QUIET—its resiliency minimizes noise and provides comfort underfoot.

BEAUTY—rich two- and three-tone colors that permanently retain their hues.

STYLE—wide choice of designs and borders adaptable to any decorative motif.

Your Choice of Two Types

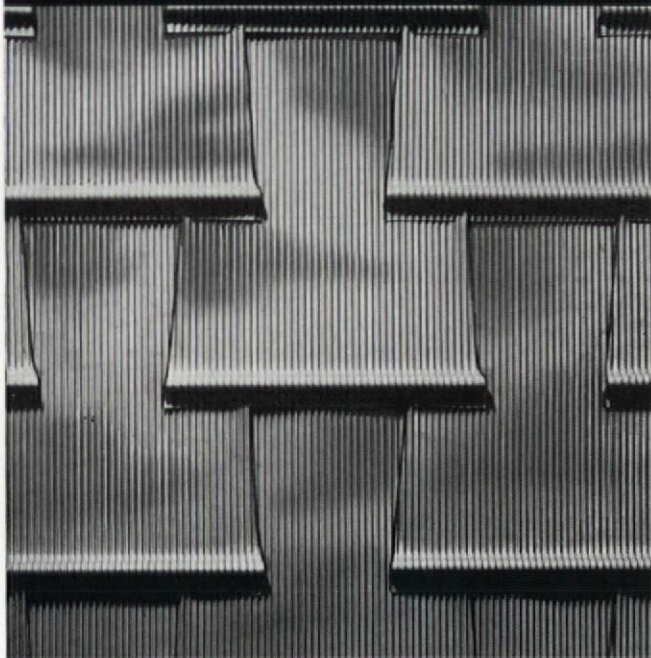
GOODYEAR RUBBER TILE—laid in individual blocks of any

specified size, shape and color in any desired pattern—a de luxe floor that will endure for many years to come. **GOODYEAR WINGFOOT SHEET RUBBER FLOORING**—laid in continuous lengths at about the same cost as good linoleum—the most economical, permanent covering for large floors; available in more than 100,000 different designs. For full data, write Goodyear, Akron, Ohio—or Los Angeles, California.

See Sweet's 1936 Architectural Catalog for complete specifications

THE GREATEST NAME IN RUBBER
GOOD YEAR
RUBBER FLOORING

The BEAUTY of Nature's
most harmonious colors
The PERMANENCE of Nature's
most everlasting metal...



What could be more fitting for a fine home or an impressive edifice than a permanent roof of enduring copper—whose warm browns or soft greens so effectively harmonize with

the building and its surroundings?

Note the thick-butted, corrugated construction of Kenmar Shingles—a new and patented principle, which takes up expansion, affords maximum strength and stiffness, and adds depth and character to the roof.

Figured per year of service, a Kenmar Roof is economy itself! It is as easy to apply as wood shingles! It gives a truly fireproof and lightningproof roof of maximum permanence and beauty—at minimum installation and upkeep cost.

We have a portfolio of samples and complete information for you. Won't you write for it on your business letterhead? Please address "Dept. 511."

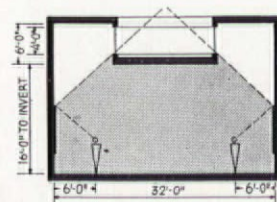
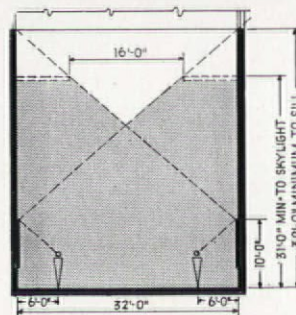
KENMAR
Copper
SHINGLES

The New Haven Copper Co.
MANUFACTURERS OF SHEET COPPER SINCE 1849
Seymour, Conn.

PRODUCTS AND PRACTICE

(Continued from page 12)

The Seager lighting system exemplifies still another point fundamental in better natural lighting: improved *quality*, rather than increased *quantity*, is emphasized. Often installations of artificial light are vastly superior to natural light, even though the artificial may provide for a level of illumination less than one-tenth as high as the natural. This is because the quality, distribution, direction, and diffusion of the artificial light may be so much better. Actually, the quantity of light entering the room with the Seager system is considerably less than the quantity ordinarily admitted by a horizontal skylight, but the quality of the illumination is much better.

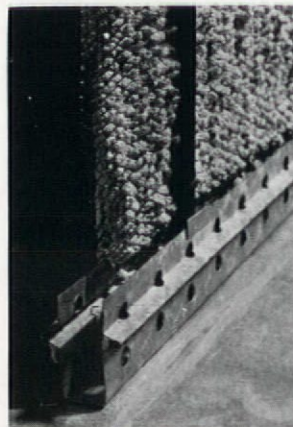


Excessive ceiling height required by horizontal skylights and clerestory windows. These diagrams show how the height required to avoid reflection of the light source in the exhibit, and consequent glare, is figured. Dash lines indicate line of sight reflected from the upper extremity of the exhibit. Shaded area is that reflected by the exhibit.

SOLID PLASTER PARTITION SYSTEM

Structural simplification, with consequent reduction of labor cost, is possible with the latest addition to the regular line of accessories for solid metal lath and plaster partition construction of the Penn Metal Co., 40 Central St., Boston, Mass.

This is a combination metal ground and runner in one piece, made of 24 gauge galvanized sheet steel. The runner is nailed to the floor with stub nails. Spaces are provided to anchor vertical channel irons in accurate alignment. The new runner eliminates the necessity for wood plaster grounds, provides a better foundation for the base, and simplifies the whole process of erecting partitions of this kind. It is also furnished without plaster grounds, to provide a similar anchorage for the vertical channels at the ceiling, or for use where grounds are not required.



PLATING LIKE PAINT

A portable machine and a special brush which enables plating to be done without removing the article to be plated from the building is an English development now available in this country. With this equipment chromium, nickel, or silver plating can be applied to steel or brass almost like paint. Bath and kitchen fittings, tableware, store fronts, signs, automobile parts—all such metal items can be plated or replated without removing them from their base. It is claimed that the brightness and durability obtained with this

(Continued on page 50)

MAGNALUX

Brings modernization WITH LIGHT

These pictures typify the modernized lighting transformation Magnalux makes possible.



● Modernization with Magnalux is almost magical in its results.

Little wonder the comptroller of the bank illustrated says, "... *these are the finest lighting units that we could have purchased.*"

Shops, stores, schools, offices, buildings and banks everywhere are selecting Magnalux with equally satisfactory results. For Magnalux is scientifically designed to produce eye-comfort illumination, to provide more light for the money, and to blend harmoniously into the surroundings.

It will pay you to know all the facts about Magnalux for lighting modernization. Your local Westinghouse Distributor will arrange an On-the-Spot Demonstration at your convenience—or write Westinghouse Electric & Mfg. Company, Lighting Division, Edgewater Park, Cleveland, O.

WESTINGHOUSE BETTER LIGHTING IS AS NEAR TO YOU AS YOUR TELEPHONE

WHEN YOU THINK OF *Lighting* THINK OF
Westinghouse



For the Architect. Have new walls decorated promptly. No long wait for walls to dry—no danger of lime burning. Texolite produces a durable, lasting paint job. Beautiful colors, high reflection, no glare, economical decoration.



TEXOLITE

New-type Casein Wall Paint

AND MODERN INTERIORS

NATURALLY GO TOGETHER

■ For beautiful modern interiors there isn't a more adaptable paint than Texolite.* Its unlimited range of exquisite colors provides gay, bright tints as well as soft, restful hues.

In addition, Texolite gives your clients 50 per cent more for their money. One gallon of Texolite makes one and one-half gallons of quality, ready-to-apply paint. One coat does the work of two coats of ordinary paint. And it saves on lighting; white Texolite reflects as much as 90 per cent of all the light that strikes it. Texolite is durable, too, it does not yellow or fade.

READ THESE ADVANTAGES

- | | |
|---|-------------------------|
| 1. Hides in one coat. | 4. Does not yellow. |
| 2. Dries in one hour. | 5. No brush marks. |
| 3. No paint odors. | 6. Reflects more light. |
| 7. One gallon makes one and one-half gallons of ready-to-use paint. | |

PROVE TEXOLITE AT OUR EXPENSE

Before specifying paint for interiors learn about Texolite. Just mail us the coupon and you will receive the large Color Guide showing 54 color chips of Texolite Deep Colors and reductions and suggested color combinations; also a full quart sample of Texolite with a sample tube of Texolite Deep Color.

*Registered Trade-mark

UNITED STATES GYPSUM COMPANY AF-11
300 West Adams Street, Chicago, Illinois
Please send me, free of charge, a sample full quart can of Texolite Paint, together with a sample of Texolite Deep Color and handy Color Guide.



My Name.....

Address.....

City..... Phone No.....

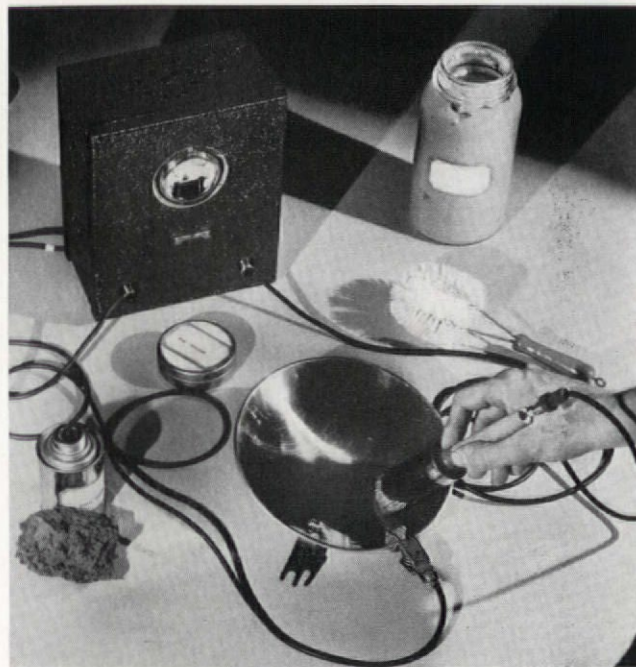
UNITED STATES GYPSUM COMPANY

PRODUCTS AND PRACTICE

(Continued from page 48)

hand brushing process is equal to the best tank process plating.

The equipment is easily carried about and the electricity needed can be obtained by plugging into any convenience or lighting outlet. The brush with which the operation is



performed is very much like a paint brush but has in the center of its bristles a renewable metal anode which is connected to a small transformer and rectifier unit. The item to be plated is also connected to the current source. The plating operation is carried out by dipping the brush in a special paste which is provided and then brushing this over the parts to be plated.

Items to be plated must, of course, be thoroughly cleaned before plating; old plating can be removed by reversing the direction of the current.

These portable plating outfits are sold by the Connecticut Electro-Plating Machine Co., 250 Park Avenue, New York, N. Y. A small machine and kit costs \$39.50; a slightly larger size, which is faster in operation, sells for \$59.50.

NON-CORROSIVE HOT WATER TANKS

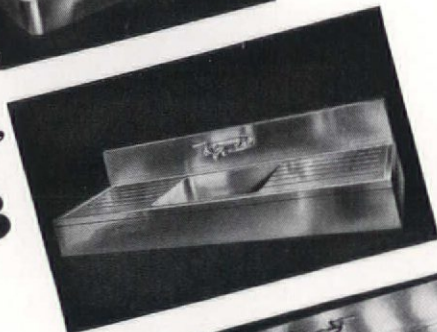
With the development of Arcoloy, a new patented metal used for the manufacture of range boilers and storage tanks, American Radiator Co., 40 West 40th St., New York, N. Y., rounds out their all-copper domestic hot water supply system. Arcoloy range boilers and storage tanks for domestic hot water are made of 95 per cent pure copper with silicon, phosphor, and other elements added to make a metal alloy which develops a corrosion-resisting skin when it is put in contact with acids or alkalis. The rated gallon capacity of Arcoloy storage tanks is 25, 30, 40, 50, 60, 80, and 100 gallons, while the range boilers are made with 25, 30, and 40 gallon capacities. All the tappings of both the boiler and storage tank are 1 in. iron pipe size. Developed in the laboratories of the Products Development Division of the American Radiator Co., Arcoloy tanks and boilers have been field and laboratory tested for the past two years for resistance to corrosive material and for tensile strength. Sulphuric, nitric, and other volatile acids and alkaline agents had practically

(Continued on page 52)

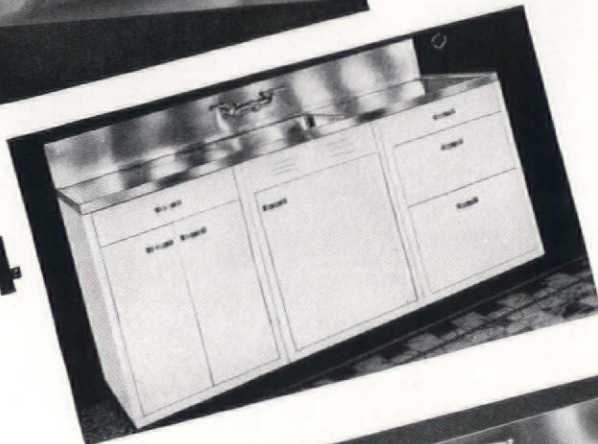
The "Streamline"
1931



The "Straitline"
1933



The Cabinet Sink
1934



Whitehead's Newest Model
Sink of Monel, Model 25
Series.

...and now,
1936!

HERE'S THE SINK OF TODAY
—STYLED FOR TOMORROW

Available, with base cabinets, in
17 standard sizes and ANY inter-
mediate length from 48" to 144".

HERE is the very latest step in the steady
progress of bringing beauty to the
kitchen. That's what you have come to ex-
pect of Whitehead, the maker, and Monel*,
the material.

For it was Monel that first led the women
of America to expect beauty—and efficiency
—in sinks, with the "Streamline" model back
in 1931. The next step was the "Straitline";
and in 1934 Whitehead led an advance
everyone has followed, with the cabinet sink.

You can put this newest model 25 series
in any kitchen you plan or modernize, with
ASSURANCE. Assurance that you're giving
your clients the utmost—with features for
convenience and beauty no other sink has.

Glance at the list and convince yourself.

This sink is head-and-shoulders above its
competitors in construction. It should be . . .
for Monel, crack-proof, rust-proof, accident-
proof, keeps its lustre and outlasts most
houses, once it's in.

Prices are as low as ever. For the com-
plete list of sizes, ask for our new catalogue,
"Whitehead Step-Saving Kitchens." Ad-
dress: Whitehead Metal Products Co. of
New York, Inc., 304 Hudson Street, New
York, N. Y.

THE INTERNATIONAL NICKEL
COMPANY, INC.

67 WALL STREET NEW YORK, N. Y.



*Monel is a registered trade-mark applied to
an alloy containing approximately two-thirds
Nickel and one-third cop-
per. This alloy is mined,
melted, refined, rolled and
marketed solely by Inter-
national Nickel.

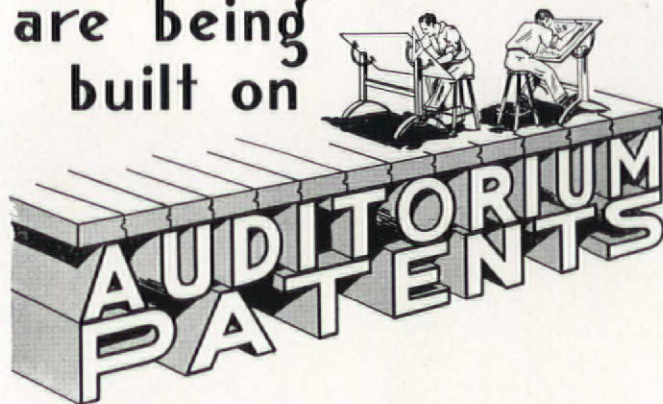


REASONS WHY THE NEW
WHITEHEAD SINK BELONGS IN
ANY MODERN KITCHEN

1. Bowl moved forward to 2½" from edge — no more back-strain from leaning.
2. Integral backsplash construction, either 1½" or 8" high.
3. Soap dish and glass holder stamped in sink deck. Easy to clean, easy to work with.
4. Pedestal swing nozzle faucet mounted on deck. (Easier to install too.)
5. 18 standard single and double bowl sizes from 48" to 144". Also available in any intermediate size in fractions of an inch.
6. Added to all this, remember it's Monel, which means: rust-proof, corrosion-resistant, long-lived, shining crystal-clear for years with ordinary attention.

MONEL

"1937" Installations For AIR CONDITIONING are being built on



MORE THAN 25 OF THESE PATENTS
and numerous applications pending

The surprisingly large number of installations being planned now for 1937 operation, will represent the most advanced ideas and scientific achievements in air conditioning. Architects and engineers now have at their command, through the AUDITORIUM PATENTS, all those ideas and inventions that have made possible the outstanding air conditioning jobs of the past. The same basic features will henceforth be applied to installations of all sizes in the future. Any architect or engineer can utilize any or all of the AUDITORIUM PATENTS for a comparatively small royalty that is paid by the owner. The owner saves on installation and operating expense. The architect increases his prestige.

The Following Listed Licensees Will Supply Full Information and Are Authorized to Grant Permission to Anyone to Install a Licensed System:

- AMERICAN BLOWER CORPORATION**
Detroit, Mich.
- CARRIER CORPORATION**
Newark, N. J.
- GENERAL ELECTRIC COMPANY**
Schenectady, N. Y.
- J. O. ROSS ENGINEERING CORP.**
New York, N. Y.
- THE COOLING & AIR CONDITIONING CORP.**
(Division of B. F. Sturtevant Co.)
Hyde Park, Boston, Mass.
- YORK ICE MACHINERY CORP.**
York, Pa.

Licensees have Branch Offices in many parts of the country

AUDITORIUM CONDITIONING CORPORATION

New York Office—17 East 42nd Street
New York

Note:—All Licensees Have Bound Copies Of The
Auditorium Patents Which Are Available For Reference.

PRODUCTS AND PRACTICE

(Continued from page 50)

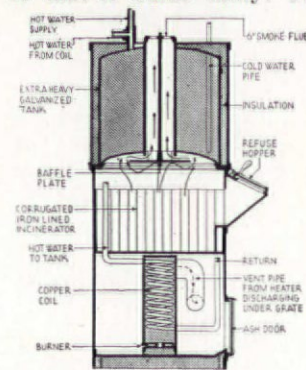
no effect on the metal, and the tensile strength for ordinary boiler purposes averages from 55,000 to 65,000 lbs. per sq. in. The tanks and boilers, guaranteed for twenty years against all normal water conditions and use, are electrically welded with Arcoloy welding rod and the spuds are made from forged Arcoloy. Arcoloy tanks and boilers have a burnished finish and are supplied with a light coat of lacquer which acts as a protective coat for this finish.

INCINERATOR AND HOT WATER HEATER

Hot water heater also heats incinerator refuse and incinerator reciprocates by heating hot water. Cooperation of this sort is obtained in the Combo Water Heater and Incinerator, where the still quite hot exhaust gas of a gas water heater is passed through refuse in an incinerator chamber, drying the refuse so that it burns easily. The hot gases resulting from the

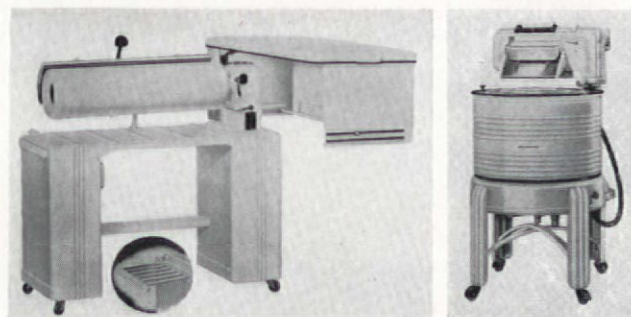
burning of the refuse are then carried through the hot water tank on their way to the flue, adding further heat to the water.

The Combo combination provides a home incinerator which, it is claimed, burns refuse completely and without odor, and reduces the cost of heating water. It is made by The Combo Co., Rochester, N. Y., with a tank capacity of 55 gallons.



LAUNDRY EQUIPMENT

The new line of the Westinghouse Electric & Manufacturing Co., Mansfield, O., provides a washer and ironer styled to harmonize with each other. Improvements in design tend to reduce vibration and noise, increase safety of operation, and



secure better washing and ironing action with less wear on the clothes.

A spinner-dryer model performs four operations: it washes, blues, rinses, and damp dries, performing two of these operations at one time.

A feature of the ironer is the swinging cabinet top which when open provides a convenient shelf for ironed pieces, when closed protects the ironing roll and provides useful work surface in the kitchen or laundry. An extension shelf pulls out from the side.

METAL ROLL-UP GARAGE DOOR

The Kinnear Manufacturing Co., 115 Fields Ave., Columbus, O., well known manufacturers of all kinds of roll-up doors, is now making the "All-Steel Rol-Top" garage door. The door

(Continued on page 54)

PURE WHITE-LEAD..

*the Paint that 86 OUT OF 100 PAINTERS
use for their OWN Homes!*



● The best judges of paint for exterior use are architects and painters.

Architects specify pure white-lead. A recent survey shows they favor it by 3 to 1. But what about painters?

What is the choice of the men who work with paint day in and day out? What do they use when the selection is entirely theirs?

Not long ago a questionnaire was sent to painters by the Forest Products-Better Paint Campaign. It asked what they used on their own homes.

**86 out of every 100
answered
"Pure white-lead"**

This overwhelming preference is based, of course, on years of experience. Painters, more than any other individuals, have had a chance to observe white-lead's ability to stand up for long periods under the most severe weather conditions.

White-lead paint does not crack and scale. On the contrary, it wears



down stubbornly by gradual chalking, which leaves a smooth, unbroken surface, an ideal foundation for new paint. Moreover, it can be mixed to suit the requirements of the job and tinted to the exact colors specified.

Dutch Boy White-Lead — good paint's other name — has long been respected for its high quality both by property owners and those who deal with paint professionally.

DUTCH BOY WHITE-LEAD

Good Paint's Other Name



NATIONAL LEAD COMPANY

111 Broadway, New York; 116 Oak St., Buffalo; 900 W. 18th St., Chicago; 659 Freeman Ave., Cincinnati; 1213 West Third St., Cleveland; 722 Chestnut St., St. Louis; 2240 24th St., San Francisco; National-Boston Lead Co., 800 Albany St., Boston; National Lead & Oil Co. of Pa., 316 Fourth Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Building, Philadelphia.

Pick-up your phone ...and We pick-up your Shipment



...that is all that need be done to have your shipment, large or small — shipped swiftly, safely and economically **anywhere** by Railway Express. Prompt pick-up by a swift motor vehicle, "hurry-up" service on fast passenger trains, and speedy delivery to destination. Railway Express' 57,263 skilled employees and 23,000 offices are ready for instant action when you pick up your 'phone. Free insurance up to \$50 covers every shipment and additional liability costs only 10 cents per \$100 valuation. For service or information telephone the nearest Railway Express Agent.

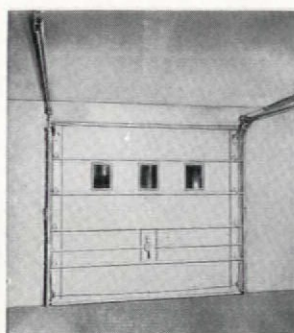
RAILWAY EXPRESS

AGENCY INC.

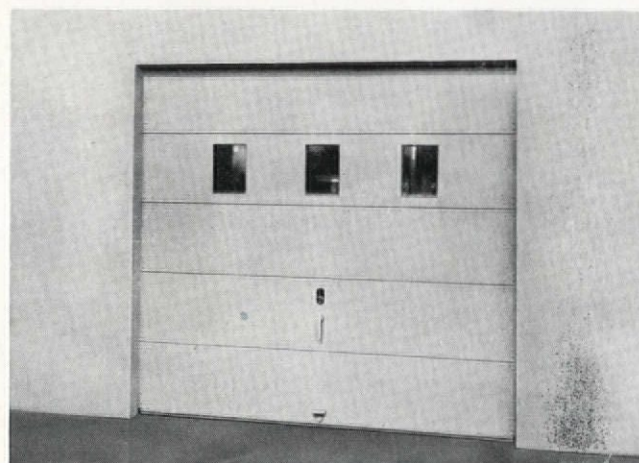
NATION-WIDE RAIL-AIR SERVICE

PRODUCTS AND PRACTICE

(Continued from page 52)

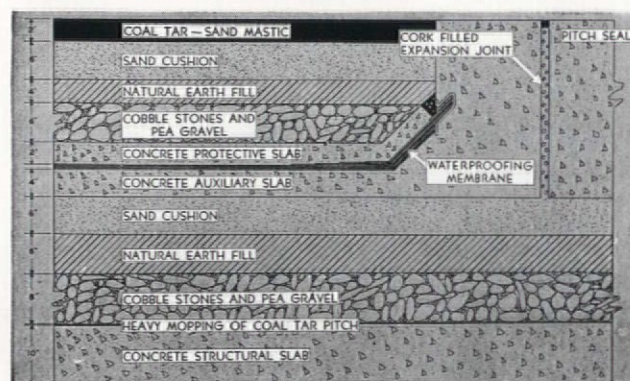


sections are rolled from heavy gauge steel sheets and then galvanized. A roll on the edge of each section provides a continuous smoothly operating interlocking hinge and also serves as a substantial reinforcement against deflection or possible warpage. Operating on ball-bearing rollers traveling in steel vertical and horizontal tracks, the door easily raises up, over, and back, being perfectly counter-balanced by



means of two matched tension springs that lay parallel to the horizontal tracks. Vertical tracks are mounted on a continuous angle assembly to which an adjustable sloping metal weatherstrip is attached. This strip engages the end of the door, forming a "Keystone" sealing arrangement. The doors are made in any size and are furnished with or without sash. It is said they meet established fireproof requirements, are very strong and weather resistant.

A SHOCK ABSORBING ROOF



At the foot of Boulder Dam is a huge U-shaped power house containing \$8,000,000 worth of machinery. Five hundred feet below the top of the dam and the surrounding canyon walls, protecting this machinery, are 180,000 sq. ft. of the greatest roof ever built. Four and a half feet thick, this roof has been designed to withstand the shock of rock falling from the canyon walls. For this roof construction, the Barrett Company furnished the materials for the waterproofing membrane and the coal tar mastic cushion.



A BUTTON

A FINGER-TIP



AND THEIR NEW SIGNIFICANCE

JUST a simple little push-button and the tip of a finger, but they signify the rounding-out of the most modern phase in elevator development. They are symbolical of Finger-Tip Control, offered by Otis to meet more perfectly every elevator need—freight or passenger. Better standards of service. Economy. New modernization possibilities.

Almost entirely automatic (usually but one human operation—the pressing of a button), Finger-Tip Control reduces the human element almost to the vanishing point. Which means that service does not vary with the ability of the operator. Result: A quality of service heretofore unknown

in the majority of buildings. Economy, because the elevator does just exactly what it should do without wasted effort.

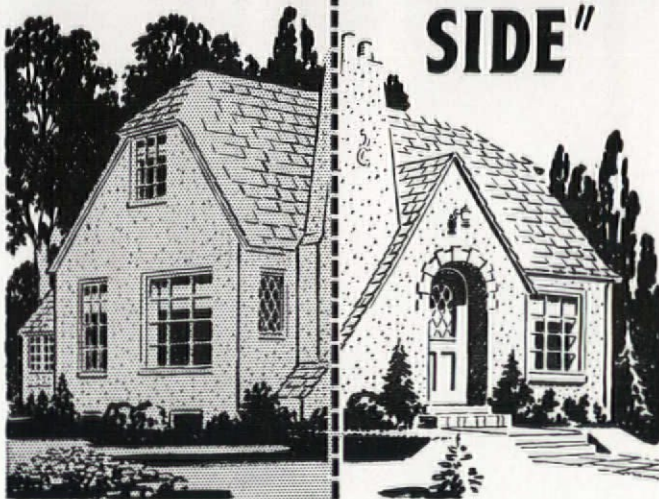
The modernization possibilities are almost unlimited because Finger-Tip Control has been designed for *all types of buildings*, large and small, residence and office, industrial and commercial. Particularly important is the fact that this latest of elevator developments adapts Signal Control

(master of the Finger-Tip Line) to moderate-speed machines. Now these installations may be modernized without the costly scrapping of a large part of the machinery, and smaller buildings may have the same type of service as their taller neighbors.

Finger-Tip Control gives a new tempo to vertical transportation. It is something that cannot be ignored by any one who has a building that must show a profit.

OTIS FINGER-TIP CONTROL
for every elevator service

In Weatherproofing Stucco and Masonry *It's Important to* **"STAY ON THE ALKALINE SIDE"**



WHITE ROCK WATER is right. It's wise to "stay on the alkaline side"—in building as well as in drinking. Stucco is alkaline—masonry is alkaline—Bondex is alkaline. No wonder they get along so well together!

Granted that it may be possible to dope a wall with an acid wash to counteract its alkalinity and produce a surface exactly suitable for an acid type of finish coating, why do the job the hard way?

Without any special preparation, Bondex may be applied direct to the original surface and a single treatment (two coats) both beautifies and preserves.

Bondex Also Ideal for Waterproofing Basements

The rainy season brings with it damp basements. Check this unhealthy, unnecessary condition with Bondex.

Send for New Illustrated Folder.

THE REARDON CO.

Chicago • ST. LOUIS • Los Angeles



Reardon's **BONDEX** WATERPROOF CEMENT PAINT

TECHNICAL PUBLICATIONS

MODERN HEATING, by Harold L. Alt, Domestic Engineering Publications, Chicago, 8 x 5, 219 pp., illustrated, cloth, \$1.00.

PRACTICAL AIR CONDITIONING, by Harold L. Alt, Domestic Engineering Publications, Chicago, 8 x 5, 259 pp., illustrated, cloth, \$1.00.

As Mr. Alt points out in his Foreword to **PRACTICAL AIR CONDITIONING**, these are practical handbooks rather than technical treatises. Their aim is to present a practical and simplified explanation of heating and air conditioning "in such a manner that the inexperienced may readily grasp the subject and apply the knowledge to everyday work."

MODERN HEATING is devoted almost entirely to latter-day developments, such as design for automatic firing for coal, oil, and gas, the vacuum air valve and graduated orifice air valve for one-pipe steam systems, forced circulation hot water systems and unit heaters. It contains useful charts and tables that are practical for checking estimating figures.

PRACTICAL AIR CONDITIONING gives actual examples of how to design air conditioning equipment. The author has taken a small office, a double office, a hospital room, a hospital ward, a small movie, a theater, a small and large shop, a department store, and a living room, and in each case has given the layout of the job, described the conditions surrounding it, determined the desired result and then has worked out step by step the problem of installing air conditioning equipment.

CALIBRON NOTEBOOK NUMBER 3, by Theodore M. Edison, Calibron Products, Inc., West Orange, N. J., 9 x 6, 44 pp., illustrated, paper, 50 cents.

An interesting booklet in which perspective and optical illusions of depth are examined in detail and presented in a thoroughly comprehensible manner. Calibron products (mechanical aids to perspective drawing) are described only incidentally to the general treatment of the subject.

SPECIAL CEMENTS FOR MASS CONCRETE, by J. L. Savage, Bureau of Reclamation, U. S. Department of the Interior, Denver, 9 x 6, 230 pp., illustrated, paper, 75 cents.

A comprehensive technical report which is a summary of all available information and experience, this booklet puts into concise form knowledge gained from the construction of Boulder Dam and experiments which preceded this construction and the construction of Grand Coulee Dam. These investigations have reduced to a minimum the shrinkage stresses and have virtually eliminated cracking of large concrete masses. The booklet was prepared by the Bureau of Reclamation as its contribution to the Second Congress of the International Commission of Large Dams.

HOME FIRE HAZARDS, 12 pp. and insert, **AIR CONDITIONING, VENTILATION AND DUST COLLECTING**, 66 pp., and **TERMITES IN THIS COUNTRY**, 66 pp., all by American Fire Insurance and Indemnity Group, New York, N. Y., 11 x 8½, illustrated, paper.

A great deal of useful information has been concentrated in these booklets from the Research Department of the American Fire Insurance and Indemnity Group, most of which is reprinted from various technical publications. Sized for filing, these handbooks are a convenient source of data on a wide variety of subjects.

Chicago's Will Rogers Theatre Is

Concrete

—the last word in beauty, fire-safety and economy

SHOW business is part art and part magic—but *business*, nevertheless. That's why so many theater owners enlist the aid of concrete in securing distinctive, striking appearance at moderate cost.

Concrete gives the designer free rein; offers a wide choice of pleasing surface textures and treatments. Great strength, fire-safety, permanence and low up-keep are inherent in it. Yet architectural concrete saves money because walls, floors, frame and ornament are cast as a *monolith* in one economical material.

Before you plan your new office

building, factory or warehouse, or your city's schools, churches and public buildings, ask your architect or engineer about the advantages of this improved technique in concrete construction. Or write for one of our engineers to call.

Let us send the handsomely illustrated booklet, *Beauty in Walls of Architectural Concrete*.

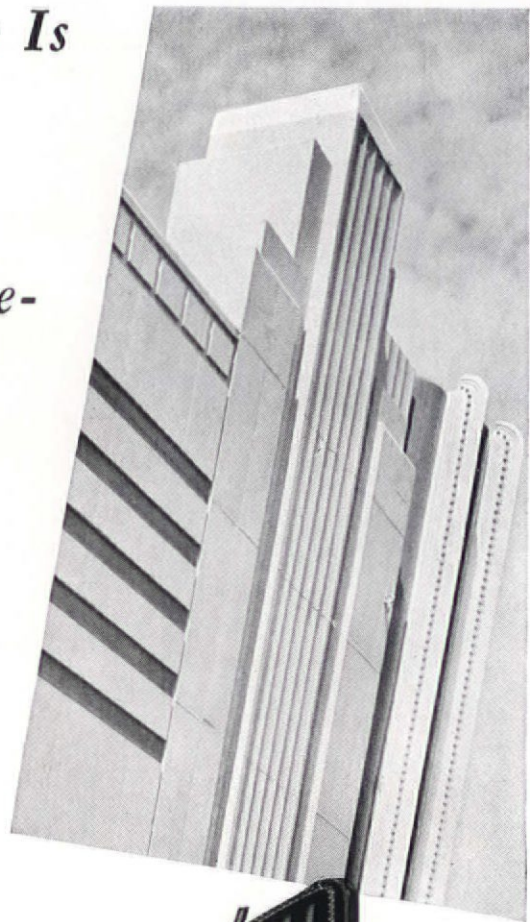
PORTLAND CEMENT ASSOCIATION

Dept. A11-7, 33 W. Grand Ave.
Chicago, Illinois

Architectural Concrete

LEFT AND ABOVE: Unretouched photographs showing the beauty of concrete walls. Interior walls, open-textured concrete masonry, combining striking modern appearance and good acoustical effect in one economical structural material

Balaban & Katz' new Will Rogers Theatre, Chicago
C. W. and Geo. L. Rapp, Inc., architects
Lieberman and Hein, structural engineers
Paschen Bros., Inc., contractor



39 Million Feet of Experience goes into the Making of **AEROFIN** Heat-Exchange Surface

The thirty-nine million feet of standardized light-weight heating and cooling surface manufactured by Aerofin in the past 13 years, represents a specialized experience in dealing with one of the important phases of the heating, ventilating and air conditioning industry.

Step by step over the years, Aerofin has improved, refined and enlarged its line to keep pace with the growing and diversified needs of this great industry. Pioneer in the introduction of modern fin-type heat exchange surface, Aerofin has always kept ahead by anticipating the practical requirements of architects, consulting engineers and heating contractors.

Aerofin remains ahead today for the same reason. Its work is the constant study of your problems, its aim, the development of a surface that meets the most rigorous specifications of your profession.

You will find everything that you have always wanted in a heating surface in Aerofin. Let Aerofin's home office or any of its branches study your needs. The prompt, personal, technical co-operation of its engineers is at your service.

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AEROFIN
is sold only by
Manufacturers
of Nationally
Advertised
Fan System
Apparatus.

MANUFACTURERS' PUBLICATIONS

ALUMINUM

"Finishes for Aluminum" has been prepared to assist users of aluminum in solving their finishing problems. Aluminum Company of America, Pittsburgh, Pa.

CONCRETE

"Architectural Concrete" Vol. 2 No. 3 contains among other things some excellent photographs of Boulder Dam and colored illustrations of colored aggregate architectural concrete work. Portland Cement Association, 33 Grand Ave., Chicago, Ill.

"Designed for Concrete" contains 55 designs for concrete houses and a description of some concrete wall and floor systems and finishes. Portland Cement Association, 33 West Grand Ave., Chicago, Ill.

Specifications on "How to Make Good Waterproofed Concrete" for various purposes, using Medusa cement, of course. Medusa Portland Cement Co., 1000 Midland Building, Cleveland, O.

"Cutting Costs in Concrete Frame Construction with 'Incor' 24-Hour Cement"—the title aptly describes the contents. International Cement Corp., 342 Madison Ave., New York, N. Y.

LIME

"Lime for Building, Industry, Agriculture" contains information about lime, briefly and interestingly presented. United States Gypsum Co., 300 W. Adams St., Chicago, Ill.

WOOD

"Beautiful Paneled Walls of Genuine White Pine" and "Paneling Old or New Interiors," two booklets dealing with the use and selection of Ponderosa and Idaho white pine for knotty pine paneling. Western Pine Association, Yeon Building, Portland, Ore.

"Oak From Southern Hardwood Forests," No. 2 of the Southern Hardwood Information Series, is devoted to Southern oak, its qualities and uses. Southern Hardwood Producers, Inc., 600 Maritime Building, New Orleans, La.

Western Pine Association, Yeon Building, Portland, Ore., has developed Permatol, a preservative for exterior millwork. Satisfied of its importance for this purpose by a long series of tests, it has issued Technical Bulletin No. 6 describing it. "Certigrade Handbook of Red Cedar Shingles"—a handbook on how and why to use shingles, the advantages of Certigrade red cedar shingles, and more information than can be discussed here. Red Cedar Shingle Bureau, Seattle, Wash.

LIGHTING

"Lighting Recommendations"—well illustrated and detailed material on a number of the good examples of "Luminous Advertising." General Electric Co., Incandescent Lamp Dept., Nela Park, Cleveland, O.

"Westinghouse Illumination Design Handbook" is a comprehensive compilation of good lighting practice which, in spite of its pocket size, contains complete design data for interior, built-in, display, sign, and floodlighting installations, and information of street, highway, and swimming pool practice. Tables give height, spacing, and lamp sizes for luminaires of many kinds and proper levels of illumination for various classes of work. Westinghouse Lamp Co., Bloomfield, N. J.

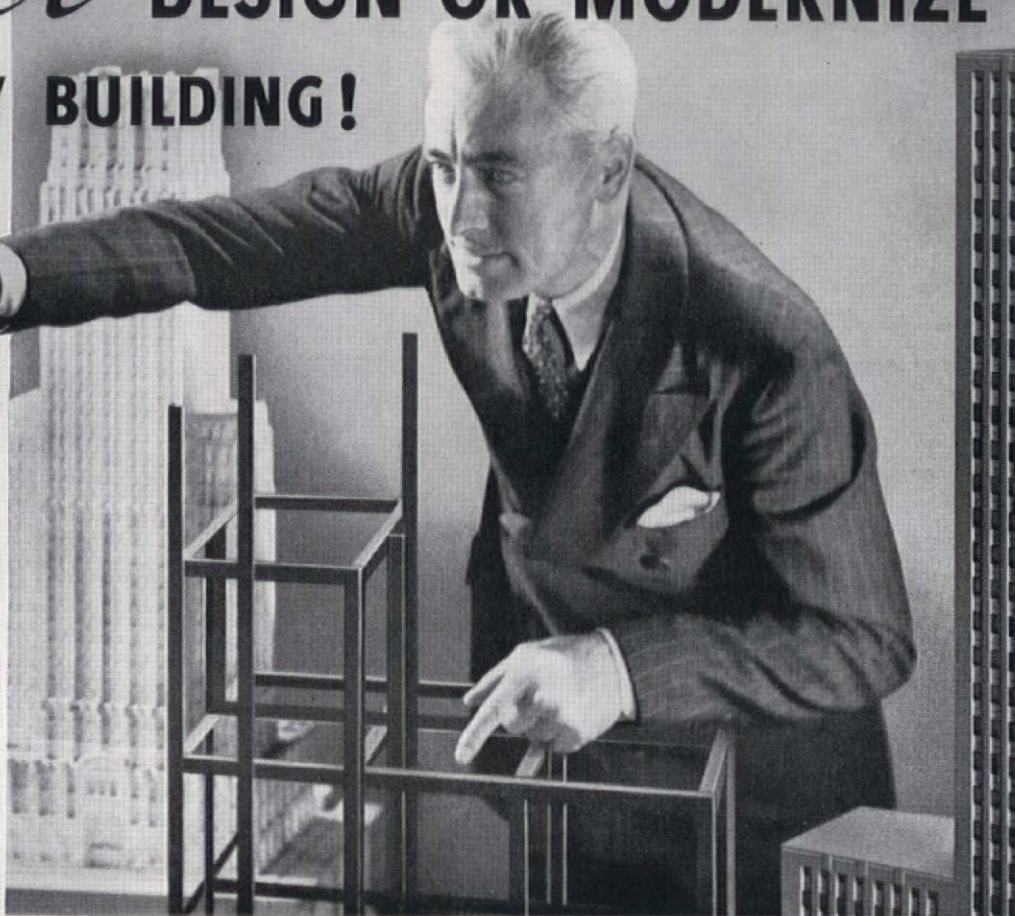
INSULATION

The Celotex Corp., 919 N. Michigan Ave., Chicago, Ill., is now guaranteeing Celotex for the life of the building. "What the Celotex 10 Point Life of Building Guarantee Means to You" explains how and why.

(Continued on page 60)

Don't DESIGN OR MODERNIZE ANY BUILDING!

... until you've
investigated the
Robertson Steel
Floor System!



Send Coupon for Free Booklet

BEFORE drawing up plans for any building or modernization project, find out how the Robertson Steel Floor System can give your client a better job, and yet effect both original and ultimate economies for him.

The use of the Robertson System saves time in construction, for example. Buildings go up 20% to 30% faster ... because Robertson Flooring eliminates temporary planking, floor forms, delays of concrete con-

struction. Other trades can work on the floor, can stack materials on it, immediately after it is laid.

This faster construction means money saved. Your client gets quicker occupancy in a new building. More weeks of revenue or usage. Faster modernization ... often without even interrupting regular operations.

The Robertson Floor combines greater strength with less weight, reduces dead weight loss. Consequently, it reduces structural steel

costs. And of supreme importance, the Robertson Floor System provides a comprehensive wire distributing system ... for each hollow steel cell in the floor is a protected wireway. The resulting electrical availability of the floor affords adequate facilities for every present or future electrical need. And that means longer profitable building life ... retarding of electrical obsolescence.

Regardless of the type of building you are interested in ... don't fail to send the coupon below for facts and data about the Robertson Steel Floor System. Do it now!

ROBERTSON STEEL FLOOR SYSTEM

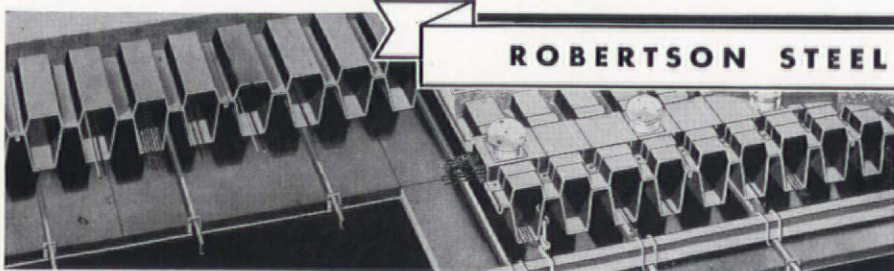
H. H. Robertson Company,
2004 Grant Bldg., Pittsburgh, Pa.

Please send me, without obligation, your booklet on the Robertson Steel Floor System entitled "New Life for Buildings."

Name

Address

City State





Edmond Town Hall, Newtown, Conn.
Philip Nichols Sunderland, Architect

MARBLE

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• This Georgian town hall shows the possibilities of a combined brick and marble exterior. The traditional flavor of the style, enriched by the dignity and beauty of marble, is admirably fitted to homes as well as public and other large buildings.

Frequently the architect is unable to plan for an all-marble exterior. In such cases, a treatment like this offers an effective solution, combining lasting loveliness and small expense.

The Vermont Marble Company supplies fine marble for all architectural purposes. We are always ready to give specific information about the use of marble in any interior or exterior plan. Write direct to:

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VERMONT

MANUFACTURERS' PUBLICATIONS

(Continued from page 58)

PLUMBING

A folder showing the Lavashower, a combination bathtub and lavatory, and its fittings. Lavashower Corp., 11 S. Sixteenth St., Philadelphia, Pa.

"Water Pipe Sizes for Plumbing Fixtures, Branches, Risers and Mains" is a booklet of technical information on brass and copper pipe for architects and engineers. Bridgeport Brass Co., Bridgeport, Conn.

"Kohler Roughing Service" is a pocket size booklet of the data and dimension needed to identify, assemble, and install the Kohler plumbing fixtures and fittings. Kohler Co., Kohler, Wis.

"Modern Heating With Filtered and Conditioned Air for Modern Homes" is a folder illustrating and briefly describing the Harvey-Whipple warmed air conditioning equipment. Harvey-Whipple, Inc., Springfield, Mass.

"Johns-Manville Industrial Products" catalogues in some detail insulating materials for the entire range of industrial temperatures, flooring, wall, and roofing materials, and many other Johns-Manville products. Also gives brief recommended specifications for the use of many of them. Johns-Manville, 22 E. 40th St., New York, N. Y.

HEATING AND AIR CONDITIONING

"Automatic Heat by Finger Tip Control," and Bulletins Nos. 336, 536, 636, and 1236 describe various automatic stoker models of the Anchor Stove & Range Co., New Albany, Ind.

"Westinghouse Air Conditioning Equipment," Chapter 3—descriptions and specifications of their air conditioning equipment combined with very useful instructions and tables for heating and cooling load determinations for various kinds of buildings and shops. Westinghouse Electric & Manufacturing Co., Mansfield, O.

"Consolidated Odor Absorbers in Air Conditioning" tells the why, what, and how of the Columbia Carbon Odor Absorbers. Consolidated Air Conditioning Corp., 114 E. 32d Street, New York, N. Y.

A pamphlet illustrating and describing Reynolds air conditioning. Reynolds Corp., 19 Rector St., New York, N. Y.

"The Covert Radiheater Fireplace," a pamphlet on the Radiheater, a fireplace unit that circulates warmed air. The H. S. Covert Co., 229 E. 37th St., New York, N. Y.

FURNITURE

"Authentic Style Book of Modern Furniture," a catalogue of modern furniture that shows not only what it is but how to use it. The Herman Miller Furniture Co., Zeeland, Mich.

A catalogue of aluminum furniture which can be supplied in colored as well as natural finishes. Warren McArthur Corp., 1 Park Ave., New York, N. Y.

MISCELLANEOUS

In the form of a tribute to the builders of Boulder Dam, The Barrett Co. presents some very interesting photographs and facts about the dam and its construction, at the same time showing the part which their products played in protecting the penstocks and rather remarkable power house roofs against water. The Barrett Co., 40 Rector St., New York, N. Y.

"Shelter"—an interesting booklet best described by its subtitle, "A Brief Glimpse at the Homes of Men Down Through the Ages." The Ruberoid Co., 500 Fifth Ave., New York. A pamphlet on "How to Use 'Handy' Silver Solders, Sil-Fos and Easy-Flo Brazing Alloys." Handy & Harman, 82 Fulton St., New York, N. Y.

To obtain any of the publications reviewed above, please communicate directly with the manufacturer. The literature can be accurately identified by mentioning this issue of The Architectural Forum.



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**SONNEBORN COULD TAKE YOU ON
 A TOUR OF ITS CUSTOMERS...**

They would be able to point out many of America's largest office buildings, institutions, factories and schools where SONNEBORN'S Tested Products have been used with greatest satisfaction . . . from the Atlantic to the Pacific; from the Gulf to the Canadian Border; in Canada and throughout the world.

Behind this record of proved performance stands a company, which during more than thirty years of steady growth, has succeeded at all times in giving honest and dependable products and service to those responsible for construction and maintenance of all types of building.

SONNEBORN'S complete engineering department is available at all times to architects, builders and school superintendents. They will gladly discuss any problems or plans you have on Waterproofing, Dampproofing or Paints; at no obligation, of course.

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LIGNOPHOL—A scientific penetrating preservative and finish for wood floors.

HYDROCID COLORLESS—For exterior waterproofing of masonry walls.

KAUKIT—Non-shrinking waterproof caulking compound.

CEMCOAT—Light reflecting enamel for interiors; also waterproof coating for exteriors and floors; is outstandingly superior for masonry surfaces.

HYDROCID WATERPROOFING AND DAMPPROOFING—Integral admixtures, foundation and plasterbond coatings.

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L. SONNEBORN SONS, INC. 88 Lexington Ave., New York City

LETTERS

(Continued from page 28)

the monuments and their eternal values.

You have done a swell job in beginning to tear down the "Ivory Tower" position of the architect as a designer and make him appear in his role of an efficient producer. It is necessary to drag the architect out of his social isolation and make him understand his position as an arbiter of social, physical and human accounting, guided by an independent intellectual drive to interpret contemporary thought in well ordered physical forms of existence.

You started with an analysis of the physical side of housing. You know that there is a consequential esthetical attitude derived from a very rational approach of your articles "From Rent to Space." I hope that you will make the circle complete.

OSCAR G. STONOROV

Philadelphia, Pa.

Forum:

... The first presentation I have seen of a scientific approach to the development of large scale housing projects.

To my mind, it is worth several bushels of stock plans, since it forces the development of plans from the basic economic considerations.

I sincerely feel that this pamphlet should be required reading for every architect and

promoter who is interested in the development of this type of project, and while it obviously requires thorough study, such study would be in the end repaid by the elimination of the endless false starts which we see in such great numbers.

MILES L. COLEMAN, Director

FHA, Large Scale Housing Division
Washington, D. C.

Forum:

... Accept my commendations for your series on apartment planning technique; just the right information that busy architects desire, when planning successful apartment houses ...

ALLEN A. BLAUSTEIN

Brooklyn, N. Y.

Fairs*

Forum:

I thought the treatment of the whole subject, with the accompanying illustration, wonderfully good, and a real contribution to the current literature of the New York Fair ...

GEORGE MCANENY, Chairman

New York World's Fair 1939
New York, N. Y.

Forum:

The article on Fairs, I think, was wonderfully well done and very interesting.

PERLEY BOONE, Director

New York World's Fair 1939
New York, N. Y.

Forum:

... I don't think that I've ever heard the situation of fairs and architecture put so clearly and intelligently. It was truly an inspiration and I feel that if the New York Fair is more than fairs have been in the past, it will certainly be due to the influence of this truly constructive article ...

ALBERT JOHNSON

New York, N. Y.

*September, 1936.

Skyline of 1936

Forum:

Now that THE FORUM has published its December issue in October it behooves me to review certain extraordinary events that may have escaped the attention of my readers. They would have escaped my attention, too, only I have eyes like a hawk.

"Roger has eyes like a hawk," my Grandmother used to tell Great-uncle Wenceslas.

"Yes, and he eats like a hog, too," Uncle Wence would reply.

1. Perhaps 1936 will go down in history as marking the introduction of the Lean-to Style of Architecture for Clients With Poor Credit Ratings. The Lean-to style takes its name from the circumstance that long before the house is completed, the plasterer has filed a lien, the bricklayer

(Continued on page 64)



One of 300 Federal Buildings

THE NEW "HOUSE" OFFICE BUILDING, WASHINGTON
MADE WEATHERTIGHT WITH PECORA CALKING COMPOUND

PREFERENCE has been long accorded Pecora Calking Compound in commercial building projects. In Federal planning also, this thoroughly dependable calking material has been used in more than 300 recently completed structures. For weather protection, for fuel conservation, for better air conditioning, Pecora Calking Compound should invariably be specified and used. Properly applied, it will not dry out, crack or chip.

For further details see Sweet's Catalogue or write direct to us

Pecora Paint Company, Inc.

Fourth & Venango Streets

Member of Producers' Council, Inc.

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Est. 1862 by Smith Bowen

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MORTAR STAINS

• SASH PUTTIES

• SUCTION MASTIC



This New Type High-Pressure Cartridge Calking Gun (patent applied for) is a great Time and Material Saver. Pecora Calking Compound is packed in Non-Refillable cartridges of approximately One Quart capacity.

PERFORATED ROCKLATH

THE FIREPROOF LATH

Has These Two Advantages Important to Architects
INCREASED FIRE RESISTANCE AT LOW COST • HOLDS PLASTER WITH EXTRA STRONG GRIP



■ Reasons for the ever-increasing use of Perforated Rocklath* may be found by checking the cost of comparable performance in *any other lath*.

For example; in face of fire, damage to framework is retarded for at least a full hour, as proved by a test conducted at the United States Bureau of Standards. At the conclusion of the test, a Perforated Rocklath partition, plastered with one-half inch of gypsum cement plaster, was shown to have qualified for a one-hour fire rating. Complete information on request.

PERFORATED ROCKLATH MAKES STRONGER WALLS

Perforated Rocklath is gypsum lath, three-eighths of an inch thick, with circular perforations spaced four inches apart. When plaster is applied it "keys" through the perforations and forms a double-strong bond with the lath—the natural bond of gypsum plaster, and a mechanical bond. Thus Perforated Rocklath, in addition to providing increased fire resistance at low cost, holds plaster to walls with a double grip.

PROVED—BY 3 YEARS' USE IN WEST

Perforated Rocklath has been given a thorough trial on the Pacific Coast. Every test in laboratories and in the field was 100 per cent satisfactory. Millions of feet of Perforated Rocklath are now protecting thousands of homes against the dangers of fire.

Perforated Rocklath is patented and manufactured by the United States Gypsum Company. Mail coupon today for free large sample of Perforated Rocklath.

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Please send me, free of charge, a sample of USG Perforated Rocklath.

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Address

City..... State.....

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LETTERS

(Continued from page 62)

has a lien and the carpenter has a lien, too.

2. The St. Nicholas silver badge for professional candor was awarded to Architect Anselm Zwert, of Banner Elk, Nev., who stated in answer to a questionnaire that he was not interested in small house designing, that he did not like to design small houses and that he did NOT feel that the future well being of the country depended on the development of a well designed house costing \$5,000 or less. When queried by horrified reporters Mr. Zwert stated, "I am a sensitive artist and I cannot do my best work with a lady client breathing down my neck."

3. Equally extraordinary was the discovery in New York City of a young woman of good family, a Vassar graduate, who publicly asserted that she knew nothing whatever about interior decorating. "I don't know anything about interior decorating and I never tell my friends that I just seem to have a natural knack for it," she said, over the protests of her attorneys. "When I want my apartment decorated I hire a decorator and keep my trap shut."

4. Indicating a Trend, statistics released by the Brookings Institute reveal that whereas in 1935 only 3,118 asphalt shingle salesmen per week called upon architects, during the 1936 season this

figure had risen to 4,853. Corrected for contraseasonal fluctuations, hangnails and botts, this figure finally emerges as 3,997 versts, 110 yen and 98/100 kronen. This is indeed an encouraging index of complete recovery in the Heavy Industries. In fact figures like this are what make the Heavy Industries heavy.

5. High honors were paid the inventor of a device that turns the radio off automatically when the telephone bell rings. The honors were not paid him for the original invention, but for a subsequent improvement that turns the radio off whether the phone rings or not.

6. The Skyline of 1936 was materially altered and its impressiveness enhanced by the discovery that up to eighteen or nineteen stories could be added to the apparent height of any building by hiring a skywriter to go up in a plane and paint the additional stories on with smoke. By using smoke to which hydrated lime, Epsom salts and used chewing gum had been added, the effect is durable enough to last ten or twelve days. This proved plenty long enough in the case at Uh, Ark., when swindlers sold what purported to be the sixteen story First Drivers & Radio Technicians Bank to a man named Choldmondely, pronounced Jones. Far from being a sixteen story building, it was as a matter of fact merely a hole in the ground, as Mr. Choldmondely discovered when he took the elevator to the six-

teenth floor and his parachute failed to open. Time Marches On!

ROGER ALLEN

Grand Rapids, Mich.

In TIME and FORTUNE

Forum:

... I have been following these in *Time** and I have been tempted to write to you and ask that you allow architects to reprint and use them.

... Your work along this and other lines should be highly appreciated by this profession and I, for one, wish to thank you very much for what you are doing. I find it hard to convince people, especially in the small towns in this area, that an architect is a necessity rather than a luxury but I am sure that with the use of your printed matter I will find the selling of my services much easier ...

F. ARTHUR HAZARD

Augusta, Ga.

Forum:

... I want to tell you how fine I think they are and to express my own personal appreciation as an architect of the thought behind these ads ...

MARSH, SMITH & POWELL

Los Angeles, Calif.

*Typical of letters received commenting on THE FORUM's educational campaign on individual architectural service currently appearing in *Time* and *Fortune*.—Ed.

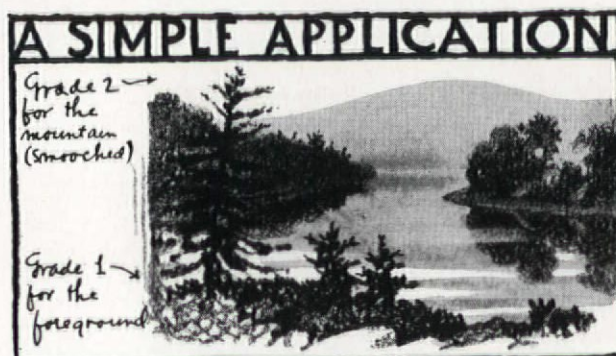
ANOTHER Koh-i-noor PRODUCT

DESCRIBED BY A. L. GUPTILL

( L. & C. HARDTMUTH CARBON PENCIL X 190A X No 1 0)
CZECHOSLOVAKIA

BLACK CHALK OR CARBON PENCIL No 190A - EACH 10¢

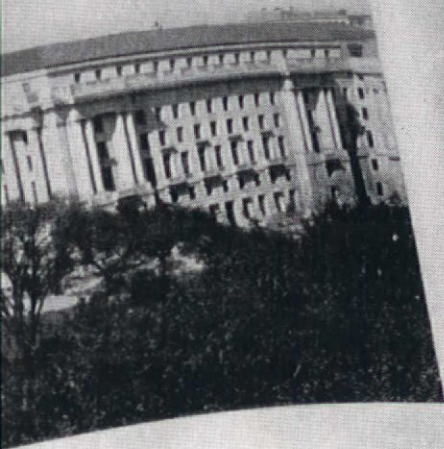
EVERY MONTH sees so many new and enthusiastic users of the Hardtmuth Black Chalk that it has proven necessary to offer it in several forms. Pencil No. 190A (pictured above) comes in 5 degrees (1, 2, 3, 4, 5), selling at 10 cents each. The Ever-pointed carbon pencil below (No. 39B) is 35¢; the leads (No. 2601) are 25¢ for 6. In stick form (No. 194), it comes in degrees 1, 2 and 3, selling for 5¢ each. All of these black chalk (carbon) leads are of exceptionally fine quality. Try them yourself! CARBON PENCIL WORK HAS NO SHINE



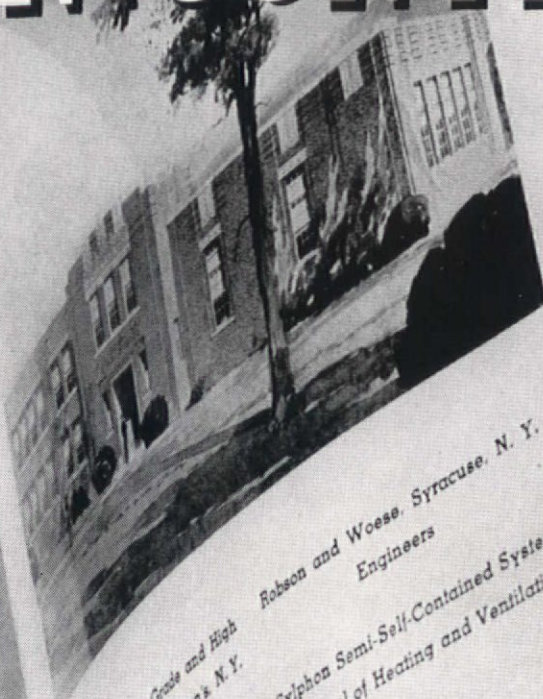
 39 B L. & C. HARDTMUTH CZECHOSLOVAKIA No 2

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• 373 FOURTH AVE. • NEW YORK • N. Y. •

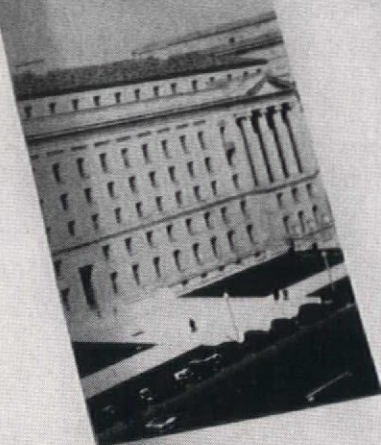
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Heating and Plumbing
Carrier Engineering Corp., Newark, N. J.
Air Conditioning



Robson and Woese, Syracuse, N. Y.
Engineers
Sylphon Semi-Self-Contained System
of Control of Heating and Ventilating



...llier Company,
...al Contractors,
Washington, D. C.
...ggs, Distler & Company, Inc.,
Heating, Plumbing
and Air Conditioning



They Speak Volumes

The installations of Sylphon Control Systems in more and more buildings of all kinds—tell their own story of complete satisfaction in control results—explain the enthusiasm of architects, engineers and building owners, alike.

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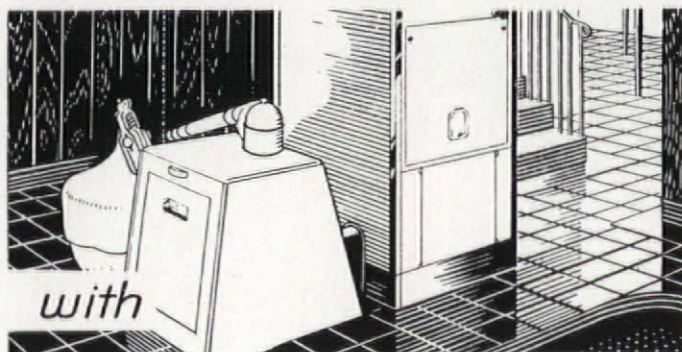
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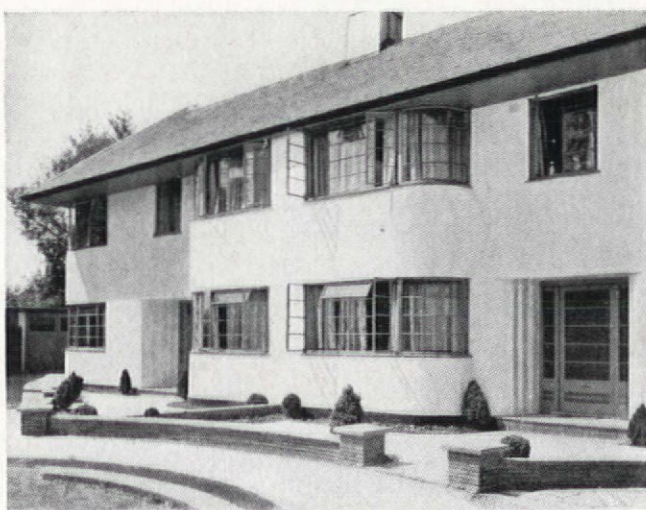
(Continued from page 22)

nese house is not anchored to the ground, but is constructed of posts which rest on small foundation stones, and the weight of the large roof and mud walls keeps the house stable.

The book is very well laid out, and the numerous illustrations are of superlative quality. If the architect wished to select one book on Japanese architecture which would present its outstanding examples, and explain its underlying philosophy, this would be a logical choice.

HOUSES FOR MODERATE MEANS, by R. Randal Phillips. Country Life Ltd., London; Charles Scribner's Sons, New York. 112 pp., 10 x 7½, illustrated. \$2.75.

This collection of small English houses is not unlike the somewhat larger book on American small houses recently published by Simon & Schuster. Like the latter, it contains interior and exterior photographs, plans, and general descrip-



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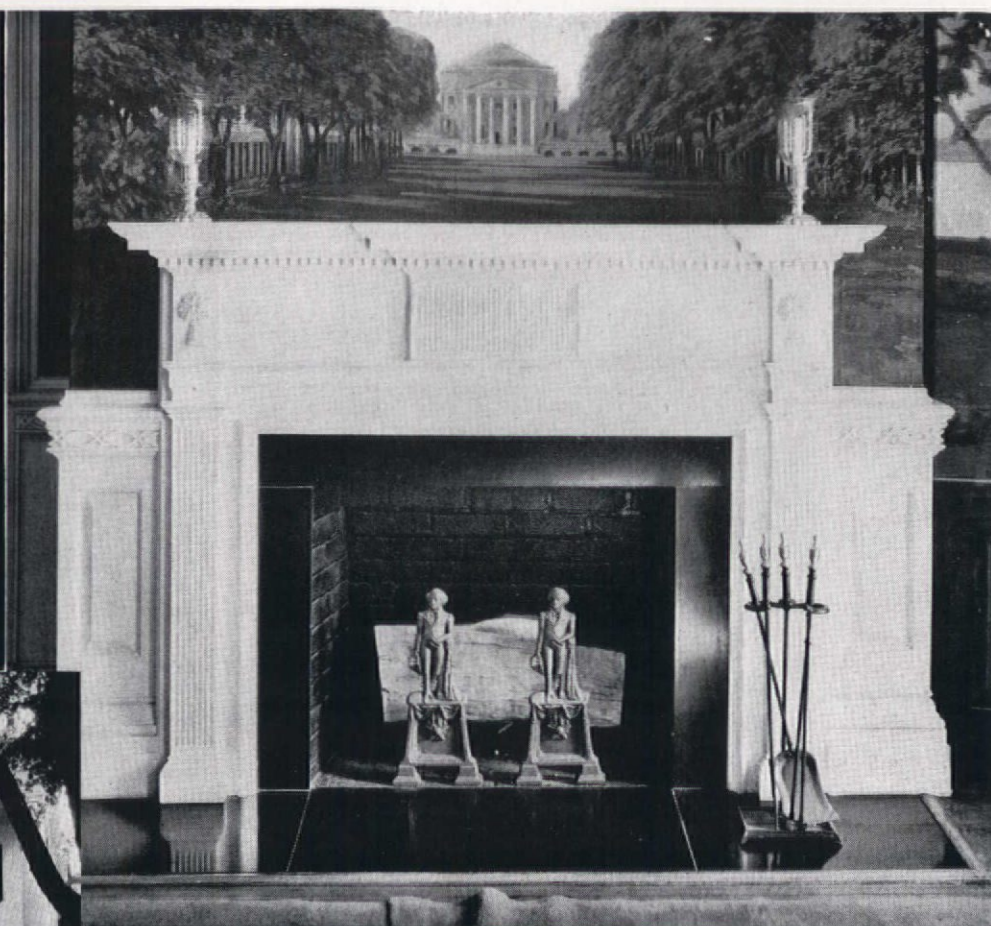
tions. Its chief interest to the American architect is for purposes of comparison and for showing present-day trends in English house design. While most of the work illustrated is not "modern" in the International Style sense, there is an obvious trend away from purely traditional forms. In many cases there are rather amusing combinations of the traditional and modern forms, some houses having thatched roofs in combination with large steel casements. Much more variety is displayed than in the American work in the same price range of \$2,500 to \$10,000.

ANALYSIS AND DESIGN OF STEEL STRUCTURES, by Almon H. Fuller and Frank Kerekes. D. Van Nostrand Company, Inc., New York. 627 pp., illustrated, 9¼ x 6½. \$5.00.

This new textbook is planned for use in undergraduate courses. The material has been presented as far as possible from the student's viewpoint and is designed to serve as a link between classwork and engineering work in the field. In addition to steel, the use of timber for scaffolding and in beams and trusses is also discussed.

(Continued on page 68)

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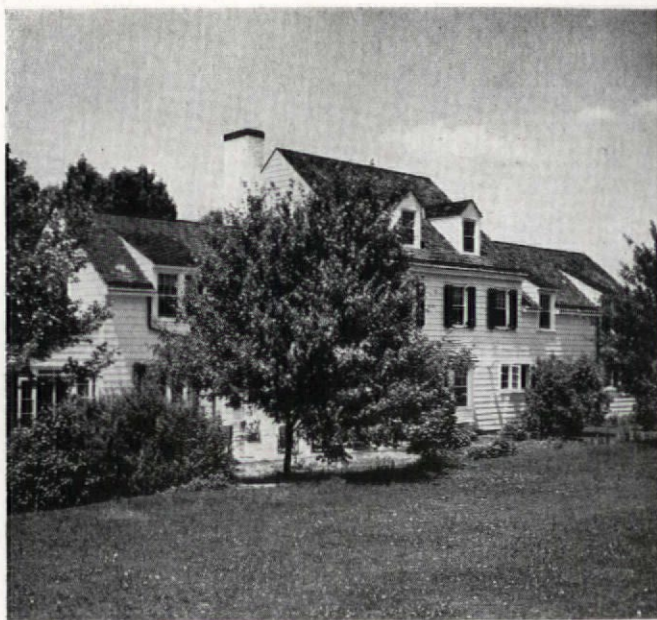
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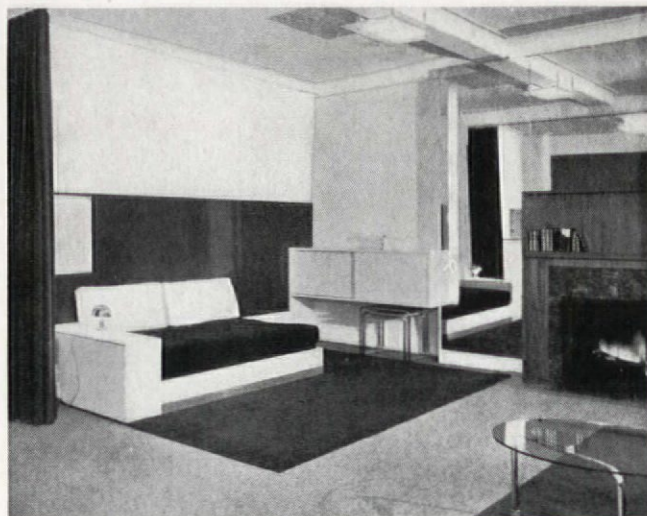
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BOOKS

(Continued from page 66)

THE BOOK OF FURNITURE AND DECORATION: Period and Modern, by Joseph Aronson. Crown Publishers, New York. 337 pp., 200 illustrations, 9 x 11, \$2.75.

A history of furniture and decoration, very much simplified and condensed for popular consumption, with the largest part of the book devoted to modern interior design. There



APARTMENT INTERIOR

are chapters on wood, fabrics, wall coverings, decorative accessories, lighting, etc. The final section, "The Principles of Decoration," contains a discussion of the functions of the various rooms and suggestions for general treatment.

CARPENTRY AND JOINERY WORK, by Nelson L. Burbank. American Builder Publishing Corporation, New York. 280 pp., illustrated. 9 x 11¼. \$3.00.

A manual of wood house construction, primarily intended for the student of carpentry. It covers all the details of house construction, showing the correct methods of framing, building partitions, doors, windows, cornices, etc. While offered as a book for the student in trade school or for a carpenter's apprentice, it deals with the subject so completely that it should be of value to the young architect, the bulk of whose work, as a rule, consists of small houses, and should be of invaluable assistance in his first attempts at supervision.

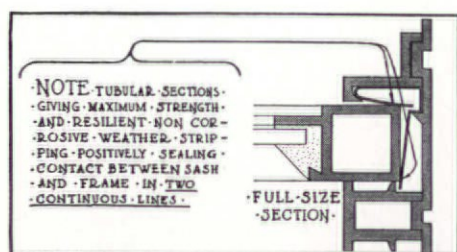
FROM FOREST TO FURNITURE, by Malcolm H. Sherwood. W. W. Norton & Co., New York. 265 pp., illustrated with photographs. 6 x 8¾. \$3.00.

A book on woods, written for the layman. It is written in a casual, informal manner, but conveys a great deal of information about the characteristics of different woods, and their suitability for furniture and other uses. A list of woods, giving their place of origin and color, is appended. There is also a bibliography and an index. A useful compendium.

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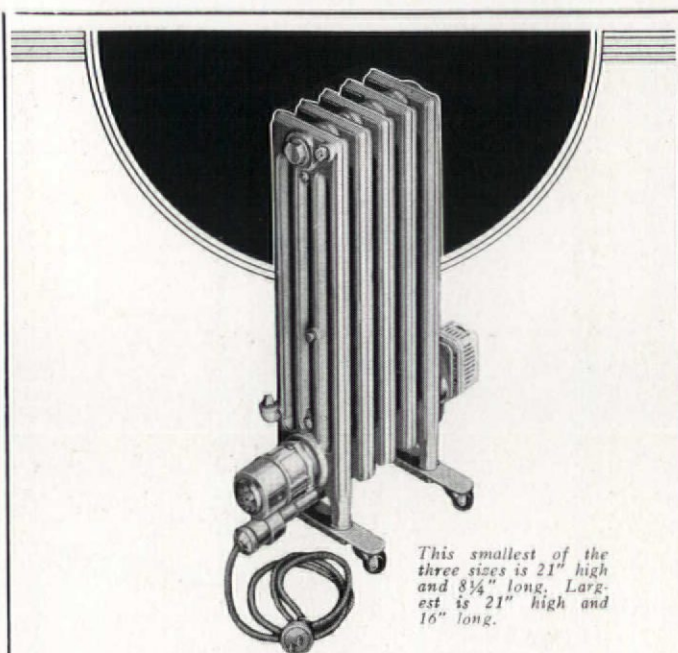
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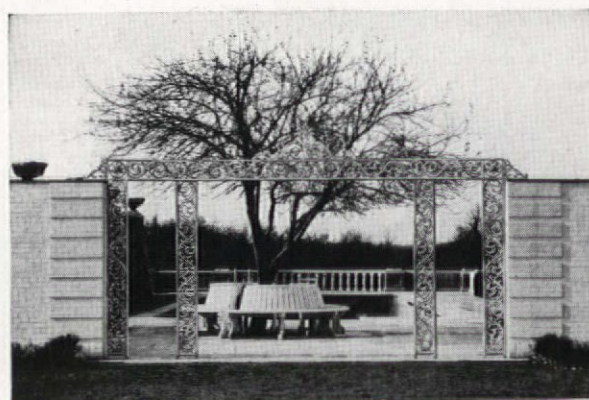
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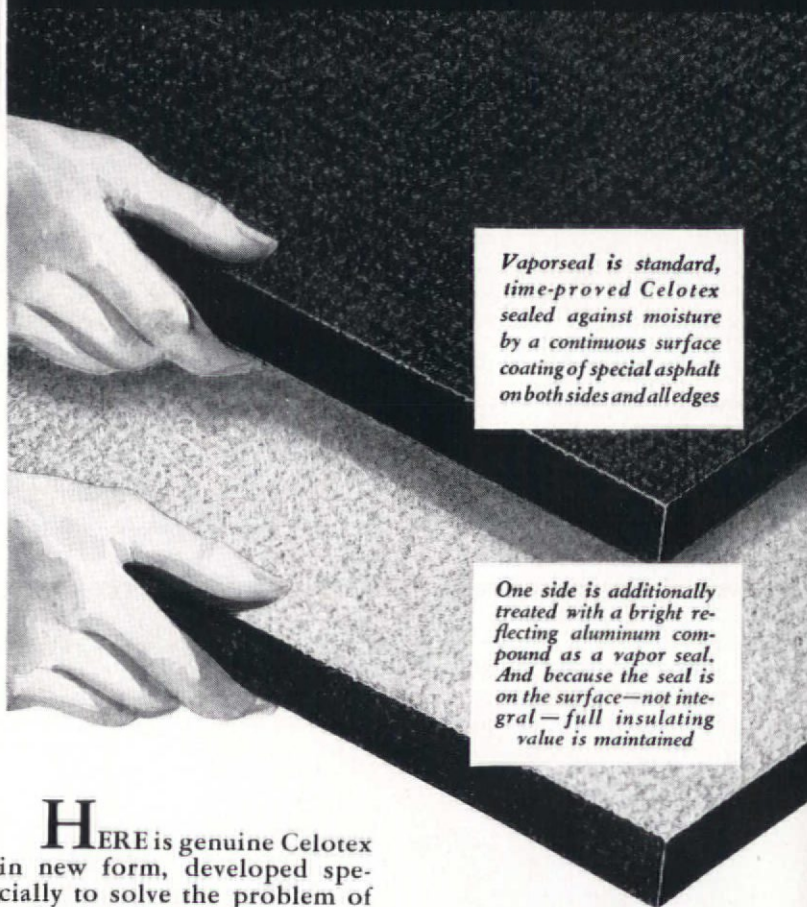
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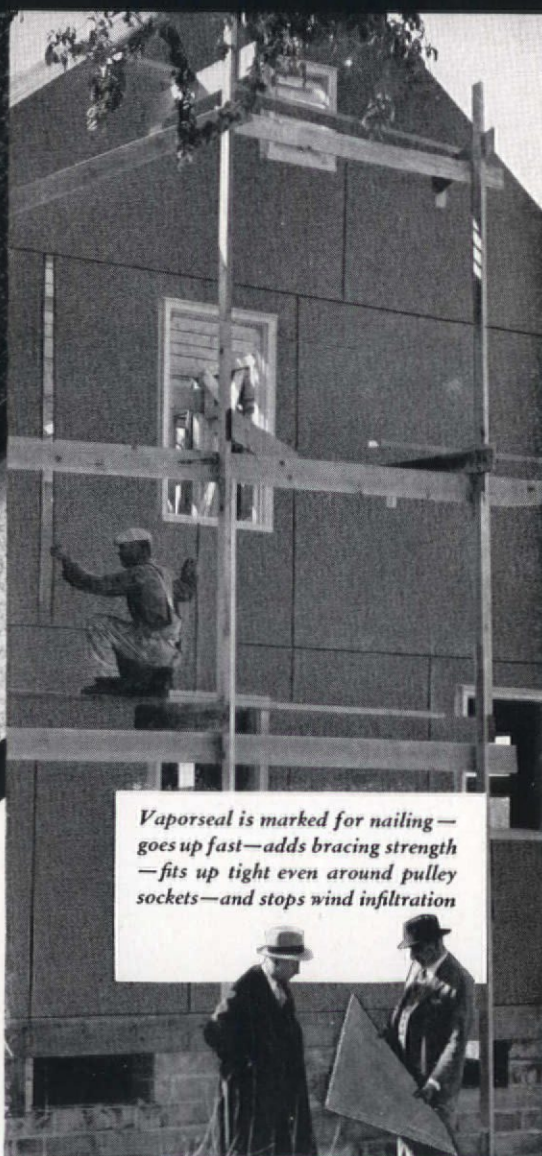
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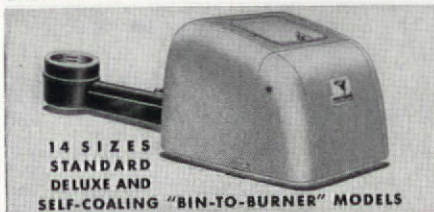
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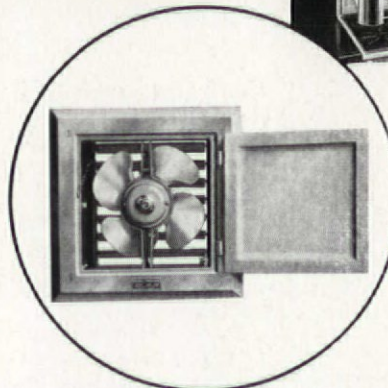
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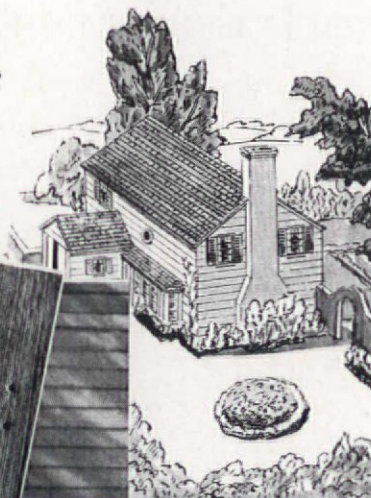
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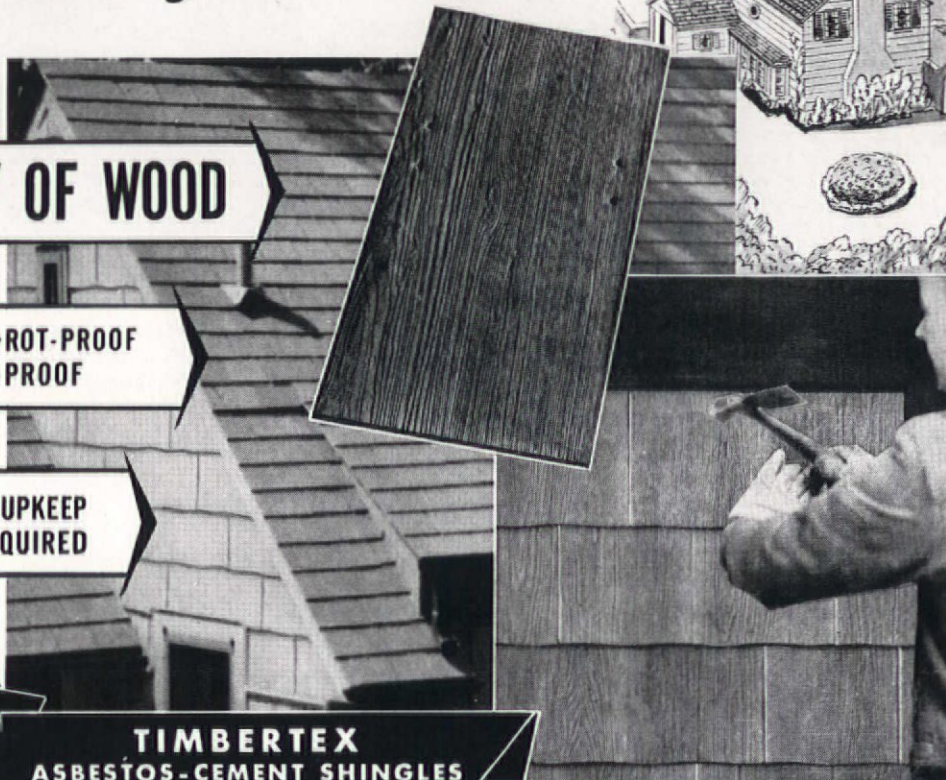
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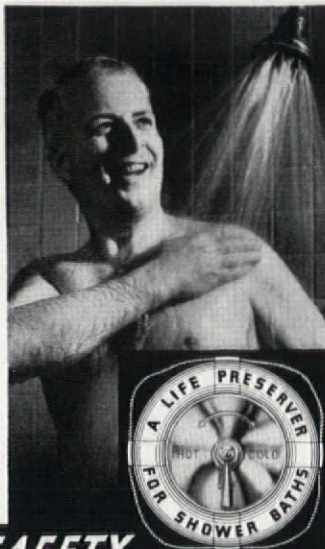
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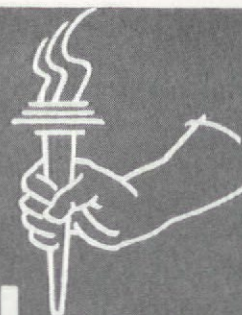


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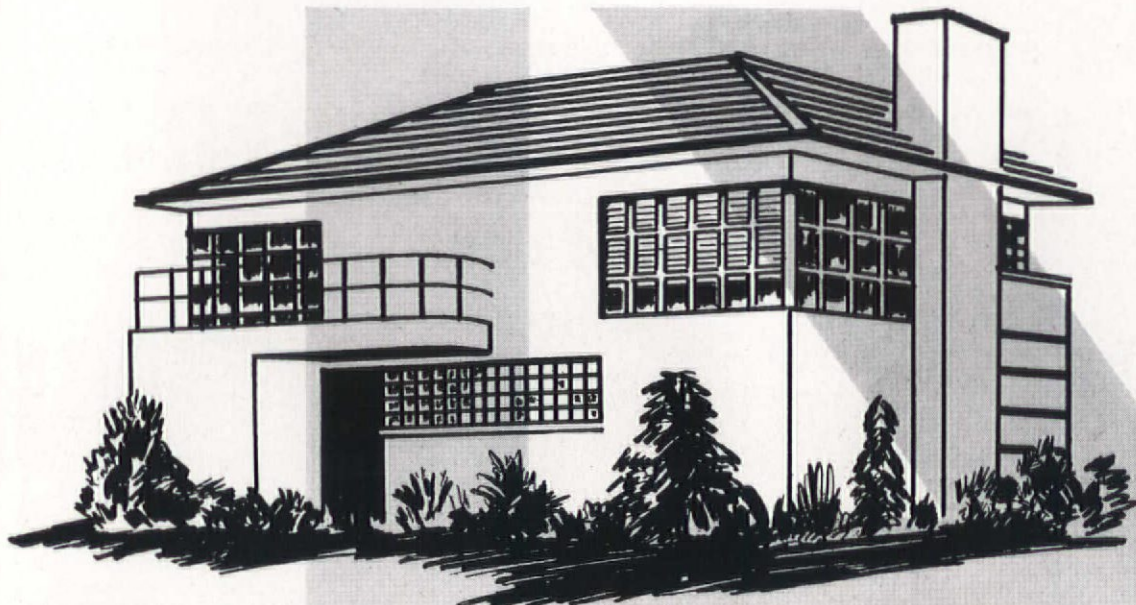
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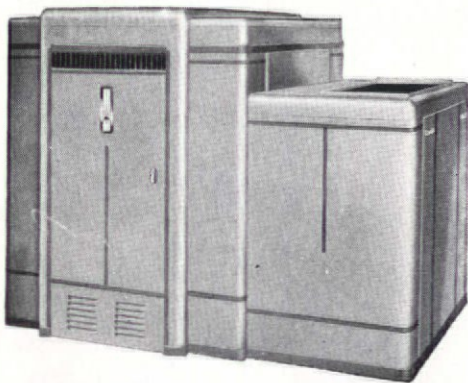
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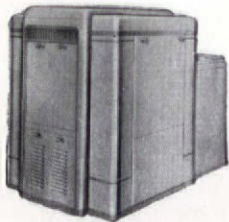
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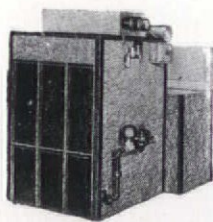
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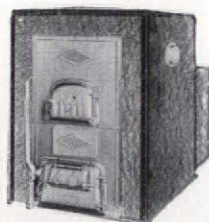
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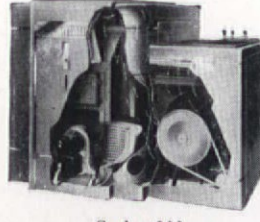
Series "D"
New Gas-Fired Air
Conditioning Unit.



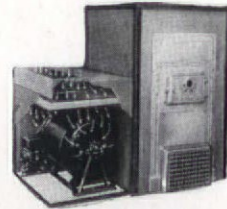
Series "C"
Gas-Fired Air Condi-
tioning Unit.



Series 20
Coal Burning Air
Conditioning Unit.



Series 200
Oil-Fired Air Condi-
tioning Unit with oil
burner.



Series 720 R
Oil-Fired Unit com-
plete with burner for
small homes with or
without basement.

SUNBEAM
AIR CONDITIONING
HEATS IN WINTER • COOLS IN SUMMER

THE FOX FURNACE COMPANY, ELYRIA, OHIO

Please send me information on:

- ☐ The complete Sunbeam line of Air Con-
ditioners and Furnaces.
- ☐ Sunbeam's free Air Conditioning layout
service.

Name

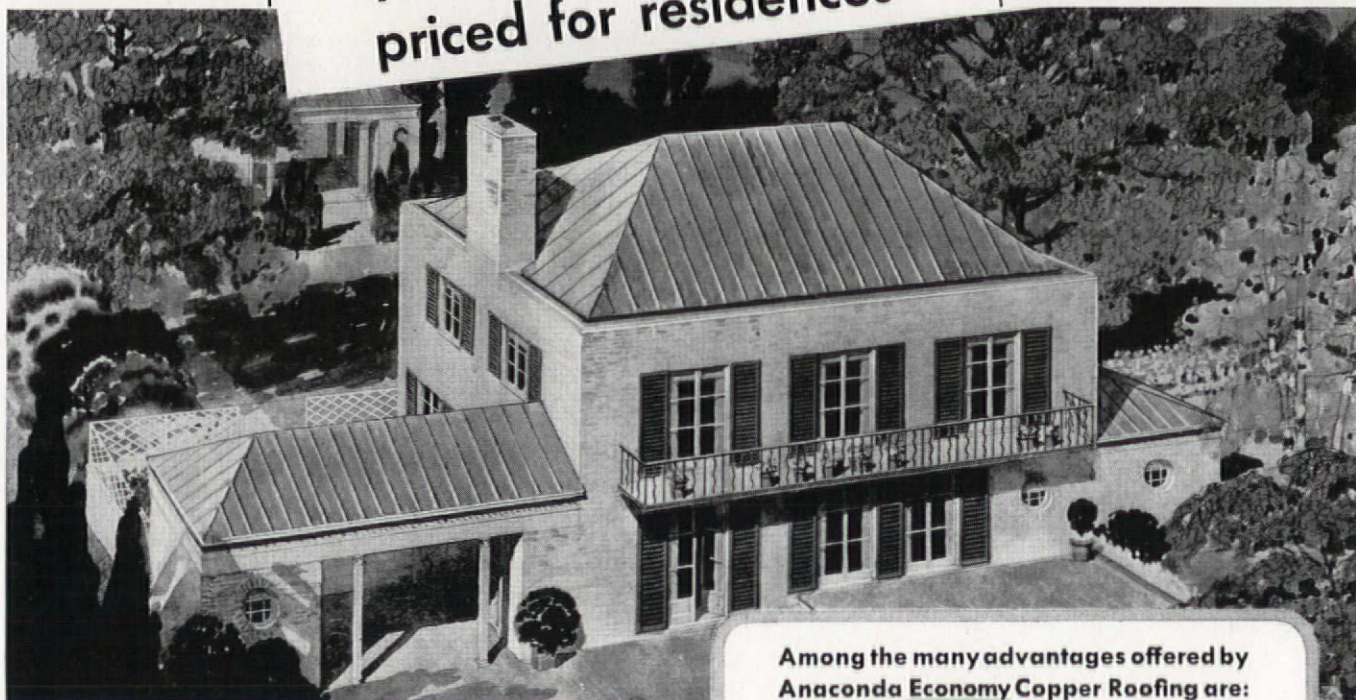
Address

City State

F-11-36

HERE IS COPPER ROOFING

especially designed and
priced for residences



This rendering of a house with a standing seam copper roof designed by Frank J. Forster, Architect, illustrates his conception of an effective employment of copper as a durable and practical roofing material.

ANACONDA *Economy* Copper Roofing offers all the traditional beauty and durability of copper, minimum expense for maintenance and many other distinctive features . . . *at a new low cost*. In fact, it provides the homeowner with a combination of advantages possessed by no other roofing material.

This new durable copper roofing (standing seam construction) is offered primarily for residences. Installations in various localities throughout the country are evoking widespread interest. Anaconda *Economy* Copper Roofing is lighter in weight (10 ounces per square foot) and is furnished in narrower sheets which provide a space of but $13\frac{3}{4}$ inches between standing seams. This reduced width is more in keeping with residential lines, and gives

Among the many advantages offered by Anaconda *Economy* Copper Roofing are:

Charm and Dignity—Weathered copper harmonizes with landscaping at all seasons.

Fire-Proof—Copper roofing eliminates the flying spark hazard.

Lightning-Proof—When properly grounded, copper roofing protects the structure against lightning.

Light Weight—One of the lightest of roofing materials, copper does not need heavy, costly supporting structure.

Insulation Protection—Impervious to moisture, copper preserves the efficiency of under-roof insulating materials of cellular type.

the 10-ounce copper approximately the same rigidity and wind resistance as heavier, more expensive material in wider widths.

38189

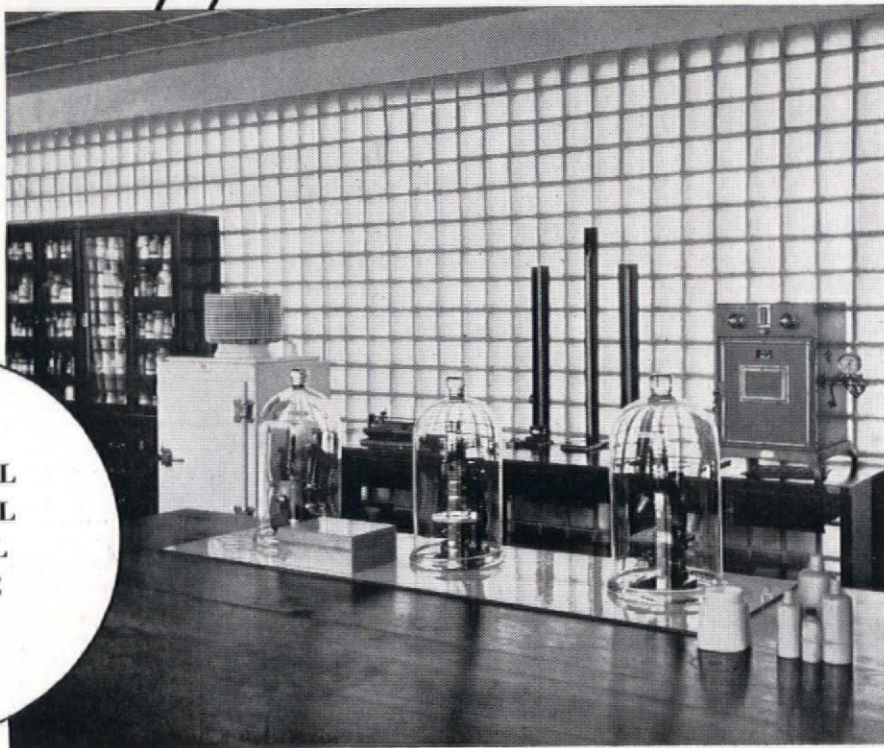
Anaconda Copper



THE AMERICAN BRASS COMPANY, General Offices: WATERBURY, CONNECTICUT
Offices and Agencies in Principal Cities • In Canada: ANACONDA AMERICAN BRASS LTD., New Toronto, Ont.

WALLS OF *Daylight*

FOR
RESIDENTIAL
COMMERCIAL
INDUSTRIAL
AND PUBLIC
BUILDINGS



Insulux glass block squarely meets present-day and future demands for a building material that is strong and clean—that resists fire, retards heat, deadens sound and withal,—*admits light*. Architects and builders everywhere are turning to Insulux because it is thoroughly practical, and because it offers unlimited opportunities for the design and erection of Walls of Daylight for beauty or utility or both.

Insulux light, comparable to that of northerly exposed windows or skylights, is diffused perfectly. It is controlled, and its intensity predetermined, by the cutting on the face of the block. As much as 86.5%, or as little as 11.7%, of the light falling upon Insulux may be transmitted without glare. For illustrations and complete details, write to Owens-Illinois Glass Company, 307 Madison Avenue, Toledo, Ohio.

OWENS-ILLINOIS INSULUX

Glass Masonry


RETARDS HEAT



ADMITS LIGHT

YOU KNOW A *modern*
BATHROOM IS VITAL

10,000
SURVEYS
PROVE IT




PATENTED PATENTS PENDING

An analysis of the Niagara-Hudson home study reveals the emphasis prospective home builders place on an up to date home. That suggests the wisdom of specifying and installing the T/N one-piece water closet. Notice the low shelf, and smart, modern design that makes it fit into all modern bathroom trends. The fact that the T/N needs no wall for attaching, and can be located beneath a window, or in a corner (even under an awkward staircase) lifts all limitation of bathroom layouts. And its extra-ordinarily quiet operation, and non-overflow feature, make it the last word in modern construction. Though the T/N is usually included in expensive bathroom plans, it's priced for even the most modest budget.

W. A. Case & Son Mfg. Co.
BUFFALO, N. Y.

W. A. CASE & SON MANUFACTURING COMPANY Founded 1853
Dept. E-116, 31 Main Street, Buffalo, N. Y.

PLEASE SEND ME COMPLETE DESCRIPTIVE LITERATURE
ON THE T/N ONE-PIECE WATER CLOSET



for business or pleasure

THE STEVENS
WORLD'S LARGEST HOTEL
CHICAGO

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF MARCH 3, 1933, OF THE ARCHITECTURAL FORUM, published monthly at Jersey City, N. J. for October 1, 1936.

State of New York } ss.
County of New York }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Sheldon R. Luce, who having been duly sworn according to law, deposes and says that he is the Business Manager of THE ARCHITECTURAL FORUM and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Time Incorporated, 135 East 42nd Street, N. Y. Editor, Howard Myers, 135 East 42nd Street, N. Y. Managing Editor, Ruth Goodhue, 135 East 42nd Street, N. Y. Business Manager, Sheldon R. Luce, 135 East 42nd Street, N. Y.

2. That the owner is: Time Incorporated, 135 East 42nd St., New York, N. Y.; that the names and addresses of stockholders owning or holding one per cent or more of total amount of stock are: Brown Brothers Harriman and Company, 59 Wall Street, New York, New York; J. P. Morgan and Company (For the Account of Henry P. Davidson), New York City; F. DuSossait Duke, Green Farms, Connecticut; Mrs. Mimi B. Durant, c/o National City Bank of N. Y., Lenox Hill Branch, 167 East 72nd Street, New York, New York; General Publishing Company (H. R. Luce), 15 Exchange Place, Jersey City, N. J.; William V. Griffin, 140 Cedar Street, New York, New York; Irving Trust Company (Benefit of Elizabeth Busch Pool), New York City; New York Trust Company (Account of Edith Hale Harkness), 190 Broadway, New York, N. Y.; New York Trust Company (Account of William Hale Harkness), 190 Broadway, New York, N. Y.; Louise H. Ingalls, c/o D. S. Ingalls, 1657 Union Trust Building, Cleveland, Ohio; R. L. Johnson, c/o Time Incorporated, 135 East 42nd St., New York, New York; Margaret Z. Larsen, c/o Time Incorporated, 135 East 42nd Street, New York, New York; Roy E. Larsen, c/o Time Incorporated, 135 East 42nd Street, New York, New York; John S. Martin, c/o Time Incorporated, 135 East 42nd Street, New York, New York; Samuel W. Meek, Jr., c/o H. A. Schaffuss, c/o Charles D. Barney & Co., 14 Wall Street, New York, New York.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signed) Sheldon R. Luce,
Business Manager

Sworn to and subscribed before me this 24th day of September, 1936.

[SEAL]

HERBERT E. MAHONEY,
Notary Public

(My commission expires March 30, 1938)

**The bath that
meets every
home-owner's
requirements**

**"Standard"
NEO-ANGLE**

● An attractive arrangement of the Neo-Angle Bath in a Darien, Conn., home.

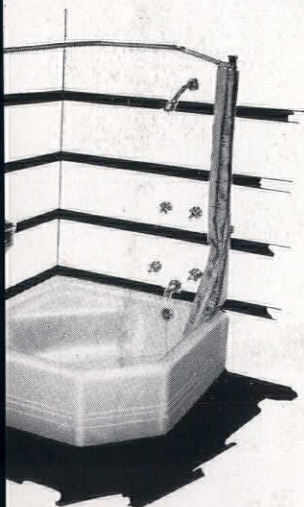


Copyright 1936 S. S. Mfg. Co.

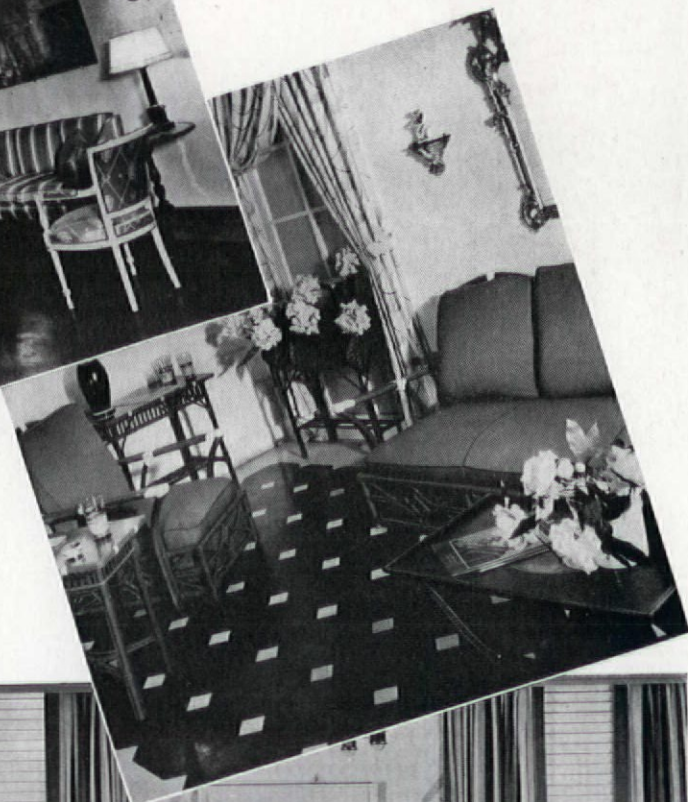
● When it comes to the bath, you can satisfy the needs of every family with the "Standard" Neo-Angle. Combined in this one bath are all the bathing features any family could desire—a roomy tub bath, a shower bath and a handy foot bath.

This sensational new square bath, with convenient seats in two opposite corners, is so attractive, yet so compact, that it provides new opportunities for unusual bathroom design. Specify America's smartest, newest bath—the "Standard" Neo-Angle—for all your homes. Write for literature.

Standard Sanitary Mfg. Co.
PITTSBURGH, PA. Division of AMERICAN RADIATOR & STANDARD SANITARY CORPORATION



corner model; Neo-Bath is ideal for bath-where it is not advis-recess the bath.



PREVIEW

The photographs on this page, illustrating the adaptability of Sloane-Blabon Linoleum for any room in the home, are a few of many contained in our Linoleum Handbook, just off the press. Let us send you a copy. You will find it packed with helpful ideas. Write W. & J. Sloane, Selling Agents Division, 295 Fifth Ave., N. Y.



SLOANE-BLABON LINOLEUM

THE *Kelvin Home*

INTRODUCING THE NEW WAY OF LIVING!

Cost: \$6,000 to \$7,000 Cubage: 20,000

At its formal presentation in October, a distinguished group of housing authorities acclaimed the Kelvin Home as a much-needed and outstanding contribution to better standards of living.

It is the first American dwelling under \$10,000 to have complete year 'round air conditioning. Its plan was designed to fit the carefully-studied needs of the average family of moderate means, the class of people who rarely afford architectural services when they build. Its equipment is complete, even to automatic heating, an electric range and refrigerator, and summer and winter air conditioning. Yet its operating cost is well within the range of the low income budget.

Behind this home is an interesting experimental and test activity started more than three years ago. The pioneer Kelvin home, built in the \$15,000 class, proved these important facts. 1. The better construction and design, essential for economical air conditioning in summer as well as winter, involved little more cost than that of conventional construction. 2. The equipment required for year-around air conditioning was moderate in cost. And 3, the operating expense on a year-around basis was low.

Encouraged by these findings, Kelvinator engaged the architectural firm of J. Ivan Dise, of Detroit, to design lower-priced 6-room homes for a nation-wide test program. As many as 35 different exterior treatments were applied. In one city, 10 of the homes were built at one time to determine the extent of savings that could be effected in this manner. Across the country, experience showed that the builder can build singly, make his normal profit, provide for sales commission, and sell the home for six to seven thousand dollars on the owner's lot.

The Kelvin Home plan, bearing the whole-hearted endorsement of typical families living in the original test houses, now is available to architects without cost, and to builders who agree to erect the homes under architectural supervision.

We believe that the architectural profession will welcome this contribution to better living for people of modest means. Architects interested in participating in the activity are invited to mail the coupon for further details. Kelvinator Corporation, Detroit.



**35 DIFFERENT EXTERIORS ALREADY HAVE
BEEN APPLIED TO THE KELVIN HOME**

Kelvinator Corporation, Detroit, Mich.
Please send me a free copy of the "Kelvin Home Book."

Name _____

Firm _____

Address _____

F



The skyline that gets under your skin . . .

Your skyline begins at your doorstep. And where you live, plus where you work are the two most important items in any skyline, Manhattan or Main Street. . . .

Mr. Rockefeller's fabulous Center may make you catch your breath—but your personal skyline engulfs you in a dozen intimate ways, creates your background, helps shape your daily life.



Fortunately, skylines are man-made. You do have something to say about yours, and the man to say it to is the architect. Whether you are remodeling your grandfather's handiwork, or starting fresh from the ground up; whether you want a new home, a modern store or an enlarged factory, an architect will give the same kind of expert solution to your problem as he gives to the skyscraper.

Your architect is essentially a business man, and in his business he must be also an artist, craftsman, engineer and student. His work neither begins nor ends with the blue prints. He studies every phase of your particular requirement, allows for the limitations of your budget and the demands of your location, plans space to suit your needs, designs in a style to please your taste, checks and coordinates every activity to make certain that you get what you want.

In building you will find that satisfaction, safety and economy are best attained through an architect. He alone is capable of creating an

integrated, livable and usable result from the intricate mass of ideas, materials, theory and practice from which all buildings evolve.

The surest way of learning what an architect can do for you, and what it will cost, is to sit down with him and discuss your problem. He will be glad to talk with you and will make no charge for a preliminary consultation.

For skylines that satisfy, first consult an architect—and then give him the support of a good builder, the right materials and sound financing.



THE ARCHITECTURAL FORUM

Published by TIME Inc., 135 East 42nd Street, New York City

THIS ADVERTISEMENT APPEARED IN TIME AND FORTUNE AND IS ONE OF A SERIES BY THE ARCHITECTURAL FORUM IN THE INTEREST OF BETTER BUILDING

AMERICAN BLOWER UNIT HEATER SALES BREAKING ALL RECORDS!

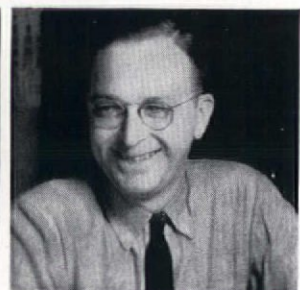


**"LOOK BEFORE YOU
BUY" TEST IMPRESSES
PURCHASERS**

Read what these users SAY!



"I've spent 30 years in engineering work," says Paul Williams, engineer. "I like the sturdy construction of American Blower Heaters."



"We tested 7 makes of heaters before we selected American Blower Units for our plant," says Carl E. Lambert, plant manager.

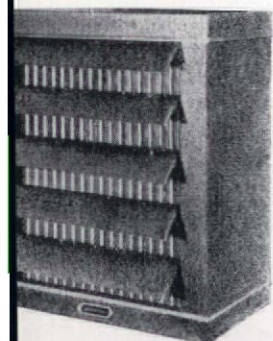
Great New Modern Method of Heating Saves Money!

Unit heaters are the time-proved, efficient method of heating factories, shops, stores, warehouses, garages, offices and industrials. They force heated air where you want it—cut installation and operating costs and occupy the minimum of space. American Blower Units are the accepted standard—proved by over 100,000 units in use heating more than 300 million square feet of floor space.

Sales of American Blower Unit Heaters are greater than at any previous time in the history of the corporation. Each succeeding month sets a new high and breaks a previous record. **The reason:** our liberal, unqualified offer of a ten-day free comparison test is proving to the complete satisfaction of buyers the extra value, better performing qualities, quieter operation and attractive, more modern design of American Blower Unit Heaters. **The result:** buyers of heating equipment are getting more for their money—are insuring their business against costly heating waste, winter blizzards and sub-zero days. Act now! Look before you buy. Ask your heating contractor for data on American Blower Unit Heaters or mail the coupon.

MAKE THIS CONVINCING TEST

Look before you buy. Compare carefully. Let us send you a Venturafin Unit Heater for a 10-day comparison test. There's no obligation. We'll pay the freight both ways—you be the judge. Just mail the coupon or phone our nearest office.



AMERICAN BLOWER CORPORATION

100 RUSSELL STREET • DETROIT, MICHIGAN
Division of American Radiator & Standard Sanitary Corporation

- ☐ Please send data on Unit Heaters
- ☐ Please send Unit Heater for comparison to:

NAME _____

ADDRESS _____

CITY _____ STATE _____

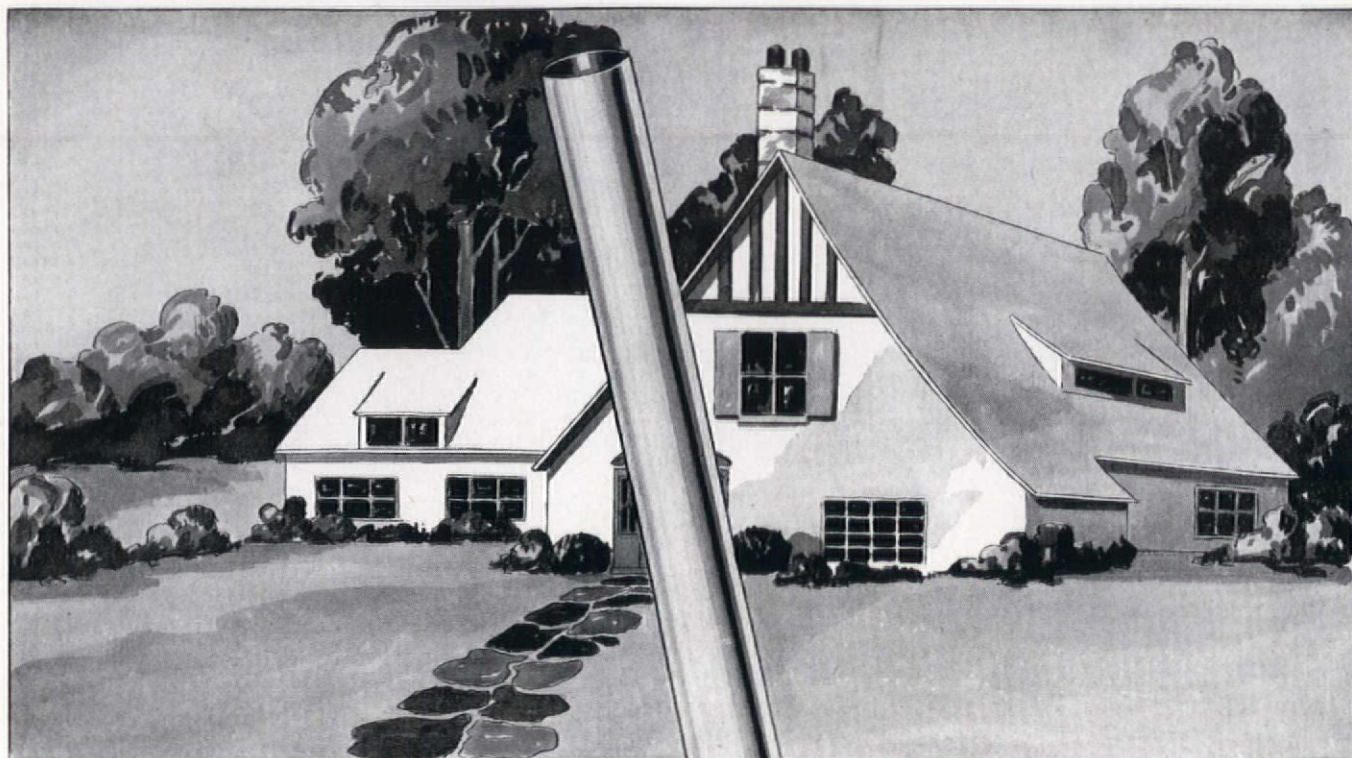


A picture isn't a masterpiece just because it is hung in the Louvre. The same picture isn't a worthless daub because it lies unseen in a dusty garret. Actually, the picture's merit has nothing to do with its surroundings, *but—you know how people are.*

Your advertisement may not actually be made worthier by appearing in TIME, but it is made worthier in the estimation of TIME readers. Busy with their individual tasks, these modern men and women must look to trustworthy sources for information. Increasing thousands have learned to rely on TIME.

They have found that TIME editors do not trifle with their attention. They approach TIME with a confidence which is shared by the advertising pages. They are not only pretty certain to see your advertisement, but pretty likely to respect, heed and buy.

TIME
The Weekly Newsmagazine



a house is **AS YOUNG AS ITS ARTERIES!!**

THE arteries of any building are its plumbing or heating conducting system. Upon their perfect operation depends the maintenance of comfort and convenience in living conditions that any home owner or tenant has the right to expect. The handsome and ultra modern bathroom and kitchen fixtures so much in vogue today can only reach their maximum efficiency if the service they render is in keeping with their design. Their smooth, trouble-free operation must not be impaired by rust-stained, slow running water and clogged pipes.

A BUILDING MAY BE YOUNG IN APPEARANCE, BOTH INSIDE AND OUT—BUT WOEFULLY ANCIENT IN ACTUAL CONVENIENCE. IT IS, AFTER ALL, AS YOUNG AS ITS ARTERIES.

A radiator may be the last word in design but if installed with a piping system that in a few short years will rust, leak and clog will gradually fail in its function as an efficient heating unit.

An installation of STREAMLINE Copper Pipe and Fittings will maintain these modern fixtures in perfect working capacity year in and year out. It will put new life in old buildings and add the latest improvement to new structures. This threadless, rust-proof, clog-proof and leak-proof copper system for plumbing or heating is revolutionary and will actually outlast the building itself. It costs very little more than corrodible materials which sooner or later must be replaced.

NIAGARA HUDSON DISCOVERS THE PUBLIC'S "PET PEEVE"

In a questionnaire being sent out by the Niagara Hudson Power Corporation to 250,000 people, asking them to check the 5 worst features in their present homes, the complaint that the ROOMS CANNOT BE HEATED EVENLY is one of the public's most important pet peeves.

You Can Be Certain of Even Distribution of Heat Through the Specifications of Streamline Copper Pipe and Fittings

An installation of STREAMLINE Copper Pipe and Fittings is not expensive. It costs little if any more, even in the first place, than one of rustable materials, and under ordinary conditions of soil or water, it will outlast the building without any repair bills. Copper cannot rust and clog. It radiates 50% less heat than iron or steel, and the heating element is delivered from the point of generation to the radiators quicker and with less temperature drop. STREAMLINE will insure maximum efficiency from your hot water or

**VISUAL
PROOF**

steam heating plant. The radiators will keep the building comfortably heated year in and year out.

*Insist that STREAMLINE be specified in your building plans,
and see that genuine STREAMLINE Copper Pipe
and Fittings are actually installed.*

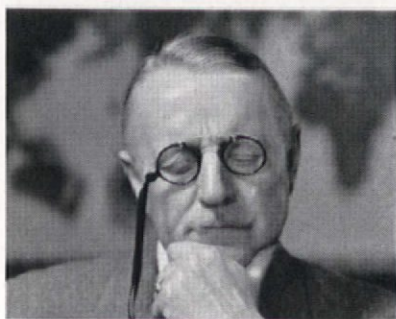
STREAMLINE
PIPE AND FITTINGS DIVISION
MUELLER BRASS CO.
PORT HURON, MICHIGAN

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ARCHITECTS AND BUILDERS ASTONISHED BY NEW TIMKEN AIR-CONDITIONING OILFURNACE



ARCHITECTS Say: "Timken certainly has rung the bell with this remarkable new unit...meets a need we've long felt... gives the public a good value... a pleasure to specify it."



BUILDERS Say: "At last we can really give people good, reliable air conditioning... takes a load off our mind... easy on the budget... hats off to Timken for this popular new job."



DEALERS Say: "Never saw a unit catch on so quickly with architects, builders and the public... this new Timken unit is a 'natural'... we're going to town with it."

*Find new low-priced TIMKEN
unit perfect for 80% of mod-
erate sized homes*

* * *

They didn't believe that such a small, compact unit could do such a whale of a heating job—but now they are convinced! Engineering experts matched performance data against typical home plans supplied by prominent architects. They proved conclusively that this new Timken Oilfurnace can easily handle heating and winter air conditioning for 4 out of 5 small and medium-sized homes... the bulk of the new building market.

Here's a unit you can stake your reputation on. Precision built throughout for dependable, trouble-free performance. Easy on the budget... especially thrifty on operating expense. That's why it completely fills the bill for John Public: *quality* air conditioning at low cost! See this job in action and be convinced that it is the best answer to the heating problems of most of your customers and prospects.

*Write TODAY for specifications,
rating data and prices.*



TIMKEN

Silent Automatic

A Complete Line of Oil Heating Equipment
Rotary Wall-Flame Burners... Pressure Type Burners... Oil-
furnaces... Oil Boilers... Air Conditioning Units... Water Heaters



Here's the new low-priced Timken winter air conditioning unit everyone is talking about.

A Complete Line of Oilfurnaces and Oil-boilers Fired With Dollar-Saving Wall Flame or Pressure Type Burners With Patented Flame Control.

You can meet any heating need best with a Timken unit... built to the exacting standards that have characterized Timken products for more than sixty years. A variety of models at a wide range in prices. For dependable operation and exceptional heating value, specify TIMKEN!

**See Sweet's Catalog for Complete
Information or Mail This Coupon**

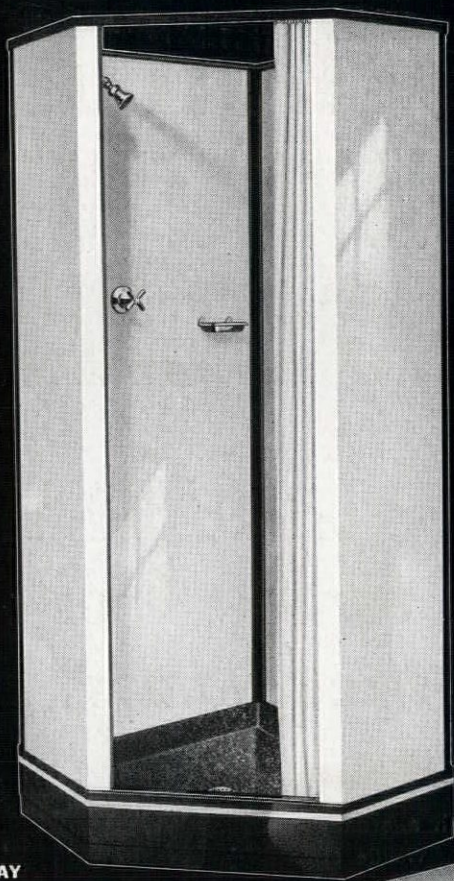
Timken Silent Automatic Division,
The Timken-Detroit Axle Co.,
226 Clark Ave.,
Detroit, Michigan.

Please send me complete information about your new low-priced GC 20-A Air Conditioning Oilfurnace.

Firm Name _____

Address _____

City _____ State _____



WEISWAY
STANDARD
MODEL VRC

A Complete Extra Bath FOR SMALL, LOW-COST HOMES



EXTRA bathing facilities are high on the list of requirements for modern living—a "must have" specification for the 1937 home. Weisway Cabinet Showers meet this insistent demand, even when budget and space are both restricted!

These complete, independent units, of guaranteed leakproof metal construction, with

WEISWAY Cabinet Showers

New Shower Bath Luxury FOR THE FINEST HOMES

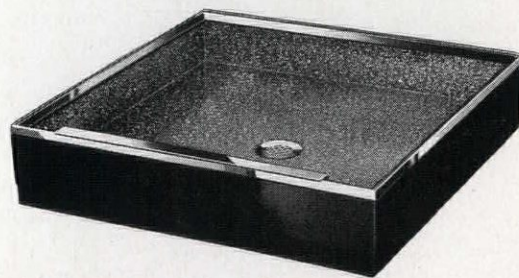


FOOT-GRIP, No-Slip floor, an exclusive Weisway feature, brings new sense of security and luxurious relaxation to shower bathing. Entire receptor, shown at right, is vitreous porcelain enamel on Armco iron—rustproof, non-absorbent and thoroughly sanitary. No special treatment of building walls or floor is required for a Weisway installation.

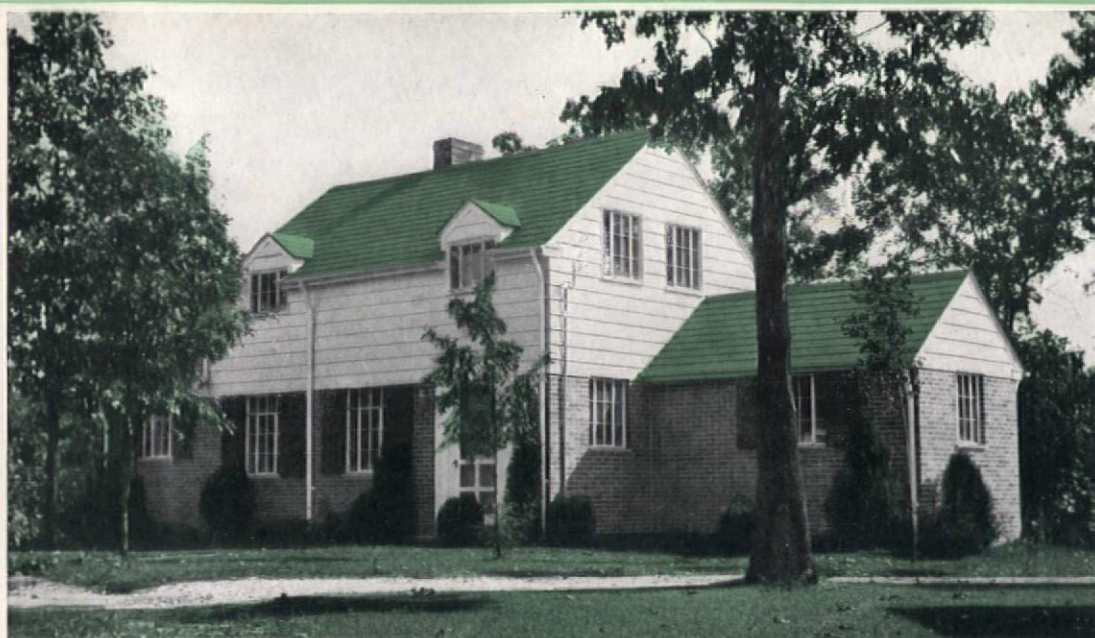
shower-head, valves and drain, are easily, quickly installed in space no larger than an ordinary clothes closet. Not affected by settling of structure or shrinkage of materials. Vitreous porcelain receptor with foot-grip, no-slip floor. Walls are vitreous porcelain or baked synthetic enamel.

Complete line includes models suitable for master bathrooms in finest homes or basement installations in simplest cottages. Any three-foot square of space may be an extra bathroom with a Weisway Cabinet Shower.

New catalog gives detailed specifications, suggests many applications in homes, clubs, hotels, institutions, boats, industrial buildings. Write now for your copy.



HENRY WEIS MFG. CO., INC. CABINET SHOWER DIVISION 1102 OAK STREET ELKHART, IND.



TRUSCON STEEL PRODUCTS

help you plan
BETTER HOUSES



Within easy reach...in your Sweet's Catalog...is an 80-page "storehouse" of information about Truscon building products of steel...all designed to help you plan structures of enduring values. • Because of the unequalled diversity of Truscon Steel products, (note list at right) it is possible to concentrate greater responsibility in the Truscon organization. Obviously, this minimizes many time-taking details otherwise unavoidable when dealing with several less-extensive sources of supply. • The trend toward better construction is reflected in the rapidly increasing volume of Truscon Steel products specified by architects, engineers and builders. To meet these widespread demands, Truscon maintains a nation-wide organization of 56 sales-engineering offices and 22 well-stocked warehouses. In addition, there are nearly 6000 dealers in Truscon Steel products. • When planning better houses, commercial buildings and other structures, make Truscon's 80-page catalog in "Sweet's" your source of reference.

TRUSCON

PROVIDES THE MOST EXTENSIVE GROUP OF STEEL PRODUCTS AVAILABLE FROM ANY SINGLE SOURCE

STEEL WINDOWS

- Residential Steel Casements
- Architectural Steel Casements
- Double-Hung Windows
- Donovan Type Windows
- Architectural Projected Windows
- Monumental Projected Windows
- Pivoted Windows
- Continuous Windows
- Utility Windows
- Basement Windows
- Coal Chutes
- All Types Window Hardware

STEEL DOORS

- Industrial Steel Doors
- Accordion Doors
- Vertical Lift Doors
- Vertical Lift-Swing and Turnover Doors
- Overdoors
- Bifold Doors
- Industrial Canopy Doors
- Airplane Hangar Doors

METAL LATHS

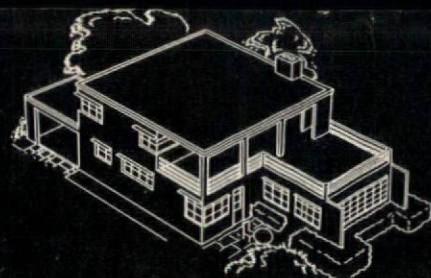
- Original Herringbone Doublemesh
- Insulmesh Plaster Base
- Diamond Laths
- "A" Metal Laths
- Hy-Rib and Diamond Rib Laths
- Trussit and Self-Sentering
- Corner Beads and Accessories

OTHER BUILDING PRODUCTS

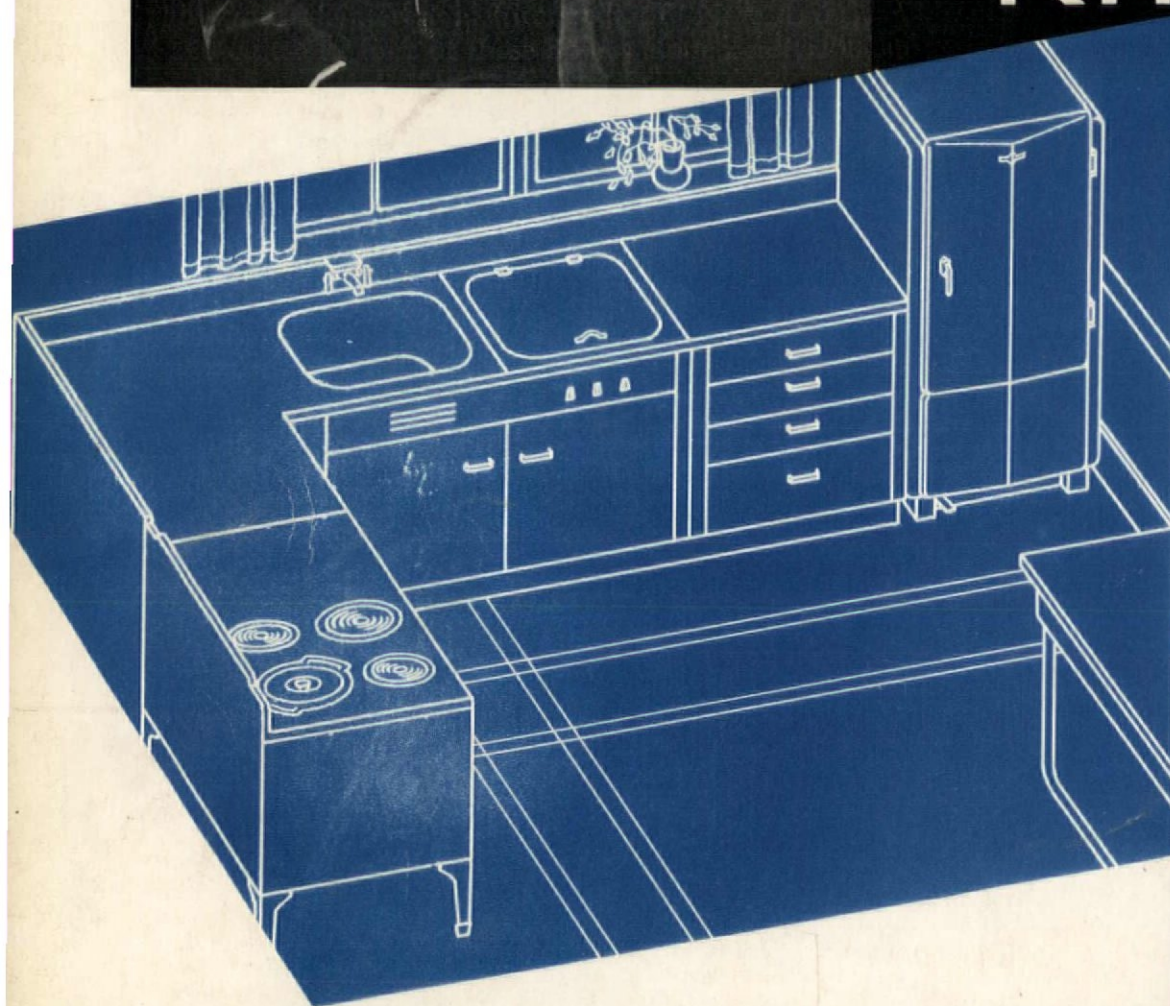
- Open Truss Steel Joists
- Open Truss Nailer Joists
- Clerespan Steel Joists
- Reinforcing Products
- Florestyle Construction
- Steeldeck Roofs
- Pressed Steel Inserts
- Duplex Bridging

Truscon Steel Company
YOUNGSTOWN, OHIO





"Let's See the KITCHEN"



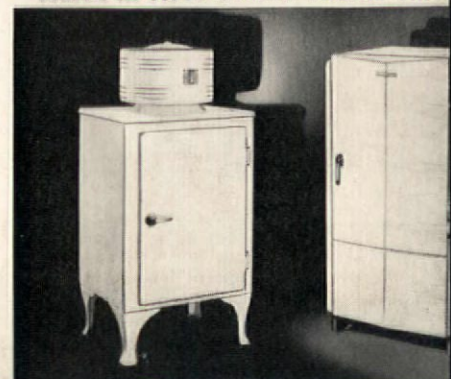
G-E RANGES—A wide variety of models equipped with the famous General Electric Hi-Speed Calrod cooking units. A size and style to meet requirements of every kitchen.



G-E DISHWASHERS—available in independent cabinet or sink type models; or in combination with the new G-E Disposall, which permits instant disposal of kitchen refuse right at the sink.



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TIME was when the kitchen was just a necessary room of the home. But times have changed and today people are "kitchen conscious." General Electric Kitchens, completely equipped with work-saving electric appliances, are proving the high spots of interest in hundreds of "New American" homes in 160 cities. In four of these homes alone nearly 200,000 people inspected the G-E Kitchens during one week. The complete General Electric Kitchen has been pre-sold to home builders, home buyers and home owners. General Electric Co., Appliance and Merchandise Dept., Section CG-11, Nela Park, Cleveland, Ohio.

General Electric Institute offers architects a helpful, free service in the planning and designing of kitchens . . . and suggestions as to electric kitchen equipment for various types of homes.

GENERAL  ELECTRIC
All Electric Kitchen